ORDER NO.VED9903275C2

Service Manual

LCD Projector

PT-L557E
PT-L557EA

CONTENTS

Panasonic

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

SPECIFICATIONS

ITEM		SPECIFICATION	
LCD panels		1.3″ Poly silicon LCD panel X 3, RGB shutter method, using Translucent TN crystal panels	
Drive method		Active Matrix 4:3 Aspect Ratio panels, TFT (Thin Film Transistor)	
No. of pixels		480,000 (800 X 600) stripe pixels X 3 panels	
Lens		1 -1.3 zoom lens , F2.5 - 3.0, f45 - 59mm Manual Focus	
Projector lamp		200W UHM lamp	
Contrast ratio		200 : 1	
Brightness		1,500 lumen / ANSI	
No. of colours		16,777,216	
Screen size		20″ - 300″ (measured diagonally)	
Projection (throw) distance		0.8m - 13.5m (2.62′ - 44.29′)	
Lens axis shift		1 : 6 Low position	
Colour systems		PAL/SECAM/NTSC/PAL-M/PAL-N/NTSC4.43	
Video input signal		1 Vp-p, sync negative, 75Ω terminated	
S-Video input signal		Y (luminance signal) : 1 Vp-p, sync negative, 75Ω terminated C (chrominance signal) : burst 0.286 Vp-p, 75Ω terminated	
RGB input signal	Video signal	RGB Analog (0.7 Vp-p, 1.0 Vp-p with sync on green, 75Ω) Unlimited numbers of colours	
	Sync signal	H/V separate, H/V composite, or Sync on Green	
	H-Frequency	24.83 - 60.24 kHz (TTL Level)	
	V-Frequency	56.25 - 85.1 Hz (TTL Level)	
RGB output signal	R.G.B.	RGB Analog (0.7 Vp-p, 1.0 Vp-p with sync on green, 75Ω)	
	HD/SYNC	Same polarity as HD/SYNC terminal of RGB IN connector (TTL Level)	
	VD	Same polarity as VD terminal of RGB IN connector (TTL Level)	
Connectors		S-Video Input: Mini DIN 4-pin X 1 Video Input : RCA pin X 1 Video Audio Input: M3 stereo mini pin X 1 Serial Port (RS-232C): Mini DIN 8-pin X 1 MOUSE input: 13-pin round X 1 RGB Display Input: D-Sub mini 15-pin X 1 RGB Audio Input: M3 stereo mini pin X 1 RGB Display Output: D-Sub mini 15-pin X 1 Audio output: M3 stereo mini pin X 1 PC Card Slot: PCMCIA Type II X 1	
Controls	Cabinet Buttons/ switches	Main Power ON/OFF, Power ON/OFF, Volume +/-, Mode, Menu, Input, ∧, ∨, <, >, Release, Capture	
	Remote Control Unit Buttons	Power ON/OFF, Freeze, Shutter, Mute, Volume +/-, Mode, Menu, Input, ∧, ∨, <, >, Light, Laser, Mouse, Click1, Click2	
Audio output		1.5 W (10% THD)	
Speaker		70 mm X 40 mm X 1 (2.76″ X 1.58″ X 1)	
Operating Temperature		5°C to 40°C (41°F to 104 °F)	
Operating Humidity		10% - 80% (non-condensing)	
Storage Temperature		-25°C to 40°C (-13°F to 104°F)	40°C to 60°C (104°F to 140°F)
Storage Humidity		5% - 85% (non-condensing)	Normal humidity
Power Supply		100 - 240 V AC (50 or 60 Hz) Automatic	
Power consumption		330 W	
Dimensions W X H X D		263 X 124 X 336 mm (10 - 6/16″ X 4 - 14/16″ X 3 - 4/16″)	
Amps		3.3 A - 1.4 A	
Weight		6.2 kg (13.7 lbs.)	
Approvals		FCC, UL, C-UL, CE, VDE, FDA	

Note:

• Specifications and design subject to change without notice.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

Caution: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance and prevent undesirable interference, use only the provided shielded VGA cable with 2 ferrite cores while connecting LCD to computer and all other connecting cables should be shielded. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC Plug before disassembling this unit.
3. It is advisable to use an isolation transformer in the AC supply before servicing.
4. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
5. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shield, and isolation R-C combinations etc. are properly installed.
6. After servicing, be sure to restore the wires, leads, insulation barriers, shields, etc.
7. After servicing, make the leakage current checks to prevent the customer from being exposed to shock hazards.

Caution: Use a separate Isolation Transformer for this unit when servicing.

LEAKAGE CURRENT CHECK

1. Connect AC Plug to a 240 volt AC outlet.
   Do not use the ground prong of AC Plug. (See Fig. 1)

   Do not use a isolation transformer for this check.

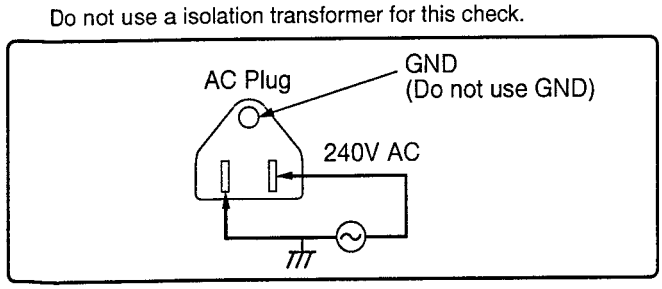


Fig. 1

2. Connect a 1.5K ohms, 10 watts resistor, in parallel with a 0.15 μF capacitor, between each exposed metallic part on the set and a good earth ground.
   (See Fig. 2)

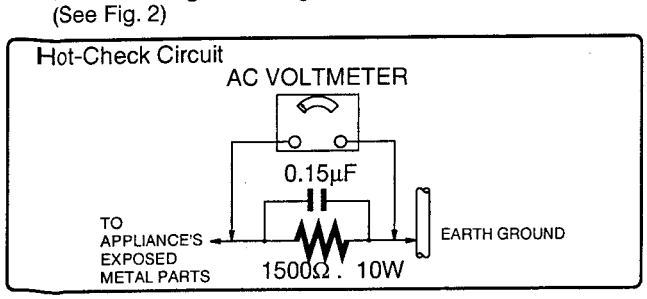


Fig. 2

3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 1.125 volt RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 0.75 milliamp. In case a measurement is outside of the limits specified, there is a possibility of shock hazard, and the LCD Projector should be repaired and rechecked before it is returned to the customer.

UV-PRECAUTION

1. Be sure to disconnect the AC Plug when replacing the lamp.
2. Since the lamp reaches a very high temperature during its operation, wait until it has completely cooled off when replacing the Lamp Unit.
3. The lamp emits small amounts of UV-Radiation. Avoid direct-eye contact.

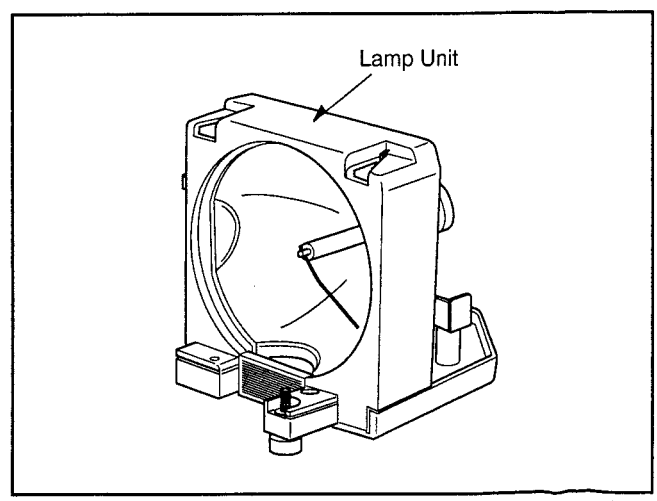


Fig. 3

Contents of LCD projector Box

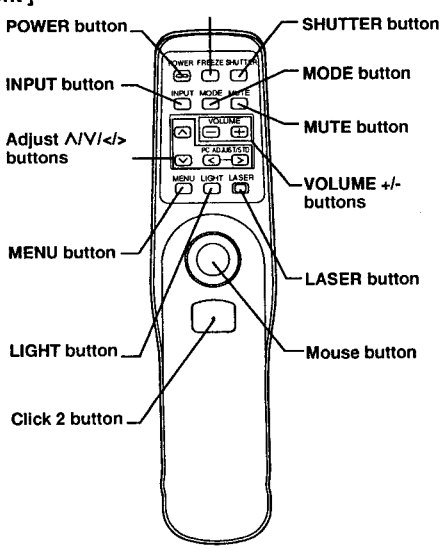
Please confirm that the following items are packed in the LCD projector box.
They are provided to help you use or set up your LCD projector.

(1) LCD projector
(2) Remote Control unit (LRQ90035)
(3) 2 "AA" Batteries
(4) Lens Cap
(5) Carrying Handle
(6) 2.44 m Power Cord (VJAS0188)
(7) 2.35 m Power Cord (VJAS0189)
(8) VGA Cable (LSJA0239)
(9) PS/2 Mouse Cable (LSJA0212)
(10) MAC Mouse Cable (LSJA0214)
(11) VGA MAC Adaptor (LSJA0158)
(12) Audio Cable (LSJA0240)
(13) Video Cable (LSJA0074)
(14) 3.5 inch Floppy Disk of JPEG Viewer for Windows 95/Windows 98 (LSFT0166)
(15) Operating Instructions (Please read completely before operating.)

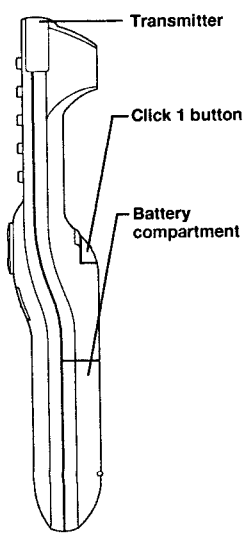
Product Information

Remote Control unit

[Front]

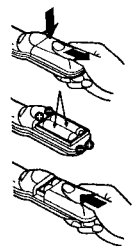


[Side]



■ Before using the Remote Control unit

• Load the 2 "AA" batteries in the remote control unit



1 Slide the lid in the direction of the arrow.
2 Install 2 "AA" batteries as indicated inside the battery compartment.
3 Replace the lid and snap into place.

Battery replacement caution
• Do not mix old and new batteries.
(Also never mix alkaline with manganese batteries.)

• Remote Control unit Operating Range

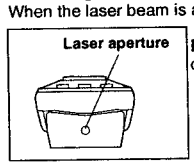
When using the remote control unit, point it at the front or rear of the LCD projector or at the projection screen. The range for optimum operation is within 30 degrees of the receiver at a maximum distance of about 7m (23 feet).

• Remote Control unit Light Up

Press the LIGHT button to illuminate the function buttons on the remote control unit for 10 seconds. The light goes out while any button is pressed down, and then comes back on for an additional 10 seconds when the button is released.

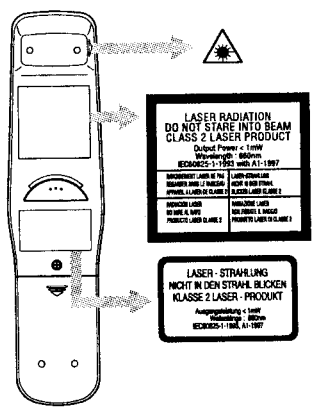
■ Using the Laser Pointer on the Remote Control unit

When the laser beam is aimed at the screen, the pointer is displayed on the screen.



Press LASER on the remote control unit to activate laser.

Warning Do not look into the laser transmitter, or aim the laser beam at a person. Shining the laser beam into the eyes could result in eye damage.

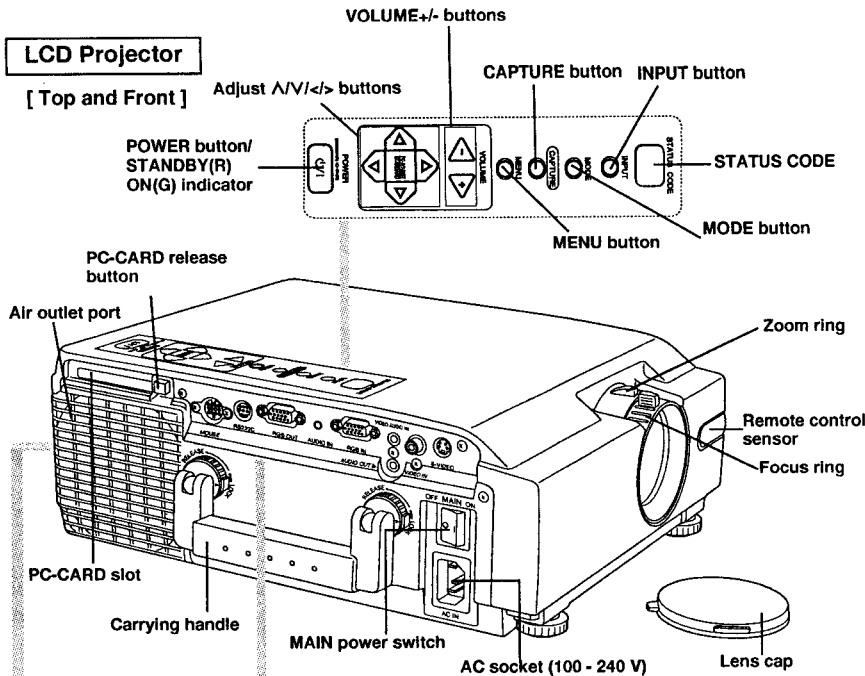


Note:
• This product has the following laser radiation specifications:
Wavelength – 660 nm, Max. output – 1 mW, Class 2.

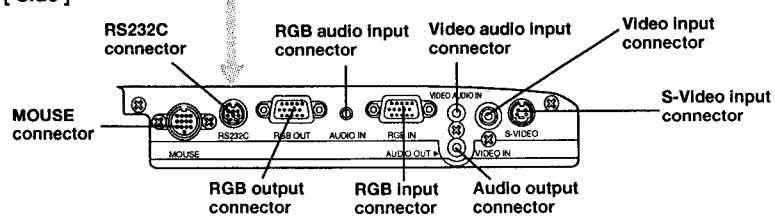
Caution-use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

LCD Projector

[Top and Front]



[Side]



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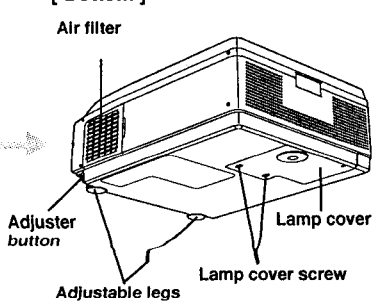

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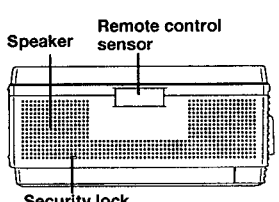

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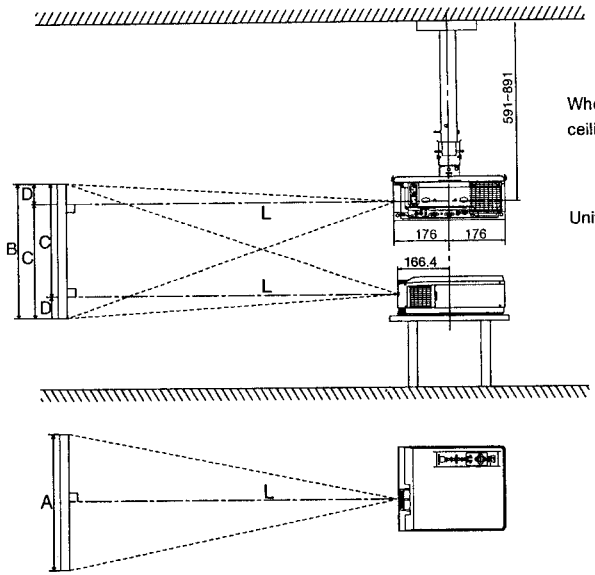
Standard Setting-up Positions

The screen should be positioned so that it is not directly touched by sunlight or room light as this will wash out the colours of the picture making it hard to see. When possible, close all blinds, curtains, etc. and dim the lights. Also, the LCD projector should be at a 90° angle to the screen for the best picture results. To determine the distance for the desired size, please refer to the LCD projector/Screen Relationship Chart below.



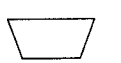
- Your LCD projector is equipped with an image reverse feature.

LCD projector /Screen Relative Position Chart

The picture can be adjusted to the desired size within the range of the zoom lens.
(This chart is based on SVGA input signal. Screen sizes will be smaller when VGA signal is used.)

Screen size	Throw distance (L)	Measure (A)	Measure (B)	Measure (C)	Measure (D)
20 inches	0.8 m (2.62 ft)	0.41 m (1.33 ft)	0.30 m (1.00 ft)	0.26 m (0.86 ft)	4 cm (1.71 in.)
40 inches	1.3 – 1.7 m (4.27 – 5.58 ft)	0.81 m (2.67 ft)	0.61 m (2.00 ft)	0.52 m (1.71 ft)	9 cm (3.43 in.)
60 inches	2.0 – 2.7 m (6.56 – 8.86 ft)	1.22 m (4.00 ft)	0.91 m (3.00 ft)	0.78 m (2.57 ft)	13 cm (5.14 in.)
80 inches	2.7 – 3.6 m (8.86 – 11.81 ft)	1.63 m (5.33 ft)	1.22 m (4.00 ft)	1.05 m (3.43 ft)	17 cm (6.86 in.)
100 inches	3.4 – 4.5 m (11.15 – 14.76 ft)	2.03 m (6.67 ft)	1.52 m (5.00 ft)	1.31 m (4.29 ft)	22 cm (8.57 in.)
120 inches	4.1 – 5.4 m (13.45 – 17.72 ft)	2.44 m (8.00 ft)	1.83 m (6.00 ft)	1.57 m (5.14 ft)	26 cm (10.29 in.)
150 inches	5.2 – 6.7 m (17.06 – 21.98 ft)	3.05 m (10.00 ft)	2.29 m (7.50 ft)	1.96 m (6.43 ft)	33 cm (12.86 in.)
200 inches	6.9 – 9.0 m (22.64 – 29.53 ft)	4.06 m (13.33 ft)	3.05 m (10.00 ft)	2.61 m (8.57 ft)	44 cm (17.14 in.)
250 inches	8.7 – 11.2 m (28.54 – 36.75 ft)	5.08 m (16.67 ft)	3.81 m (12.50 ft)	3.27 m (10.71 ft)	54 cm (21.43 in.)
300 inches	10.4 – 13.5 m (34.12 – 44.29 ft)	6.10 m (20.00 ft)	4.57 m (15.00 ft)	3.92 m (12.86 ft)	65 cm (25.71 in.)

- If the LCD projector and the screen are not properly placed, the picture will be distorted producing a keystoned image as shown at right.



Keystoned Image

Caution: When you set up the LCD projector

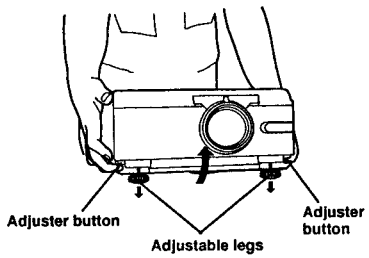
- Do not place it in humid or dusty places, or places where the air is sooty or full of cigarette smoke. If the lens, mirror, or other optical components become dirty, the picture will blur or darken, making viewing difficult.
- Do not expose to extreme heat or cold. Operating temperature: 5°C – 40°C (41°F – 104°F)

■ Setting the projector up horizontally

If the projector is not set up so that it is horizontal, it will not be possible to obtain a distortion-free picture. If placing the projector on top of a table or similar surface, carry out the following procedure below to ensure that no distortion of the picture occurs.

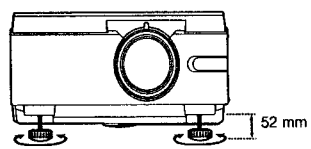
• Adjustment procedure

1. Lift the front of the projector until the projector as a whole is horizontal. While holding it in this position, press the adjuster buttons under the sides of the projector (1 each at left and right). When the buttons are pressed, the left and right adjustable legs will drop down until they reach the setting-up surface.
   Note:
   • Do not release the buttons until both legs have reached the setting-up surface.



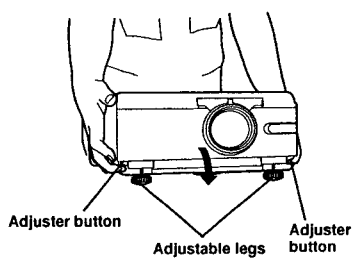
2. Release the adjuster buttons. (The adjustable legs will lock as soon as the buttons are released.)

3. Turn the adjustable legs by hand in either direction to make fine adjustments to the level of the projector so that the projector is perfectly horizontal.
   Note:
   • The legs can be extended by up to 52 mm. If you try to extend them any further than this, they will merely spin freely.



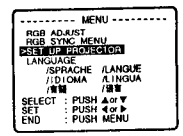
■ Retracting the adjustable legs

After lifting the front of the projector slightly, press and hold the adjuster buttons and then gently lower the projector.
Note:
• Be sure to support the projector firmly while pressing the adjuster buttons. If the adjuster buttons are pressed without supporting the projector, the adjustable legs will suddenly unlock and the projector will fall down, which could damage the projector.



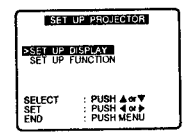
Setting-up Positions and Changing the Projection Mode

The projection mode used by the projector can be changed in accordance with the setting-up position. Including ceiling mounting, you may select from four direction types. All the time of shipment from the factory, the projector is set to the No.1 "FLOOR/FRONT" projection mode, but this can be changed if required.



1 **Press MENU** to display the menu.

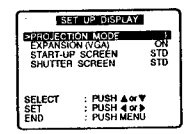
2 **Press Λ or V** to select "SET UP PROJECTOR", **and then < or >** to display the screen.

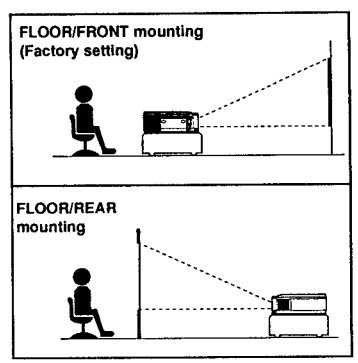


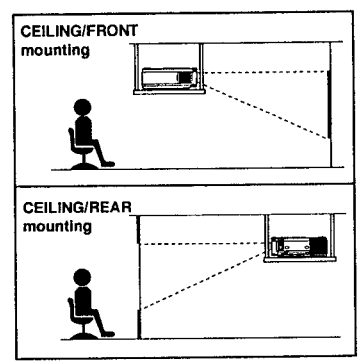
3 **Press Λ or V** to select "SET UP DISPLAY", **and then < or >** to display the screen.

4 **Press Λ or V** to select "PROJECTION MODE", **and then < or >** to select projection mode from 1 to 4.

- Select 1 ..... FLOOR/FRONT (Factory setting)
- Select 2 ..... FLOOR/REAR (Right and Left displays in reverse)
- Select 3 ..... CEILING/REAR (Up and Down displays in reverse)
- Select 4 ..... CEILING/FRONT (Up and Down/Right and Left reverse display.)







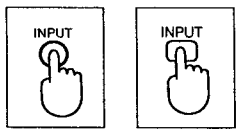
Note:
• If the letter on the screen is projected inversely or upside down, you set the wrong projecting mode.
• Press MENU to remove the setup screen and menu.

Basic LCD projector Operation

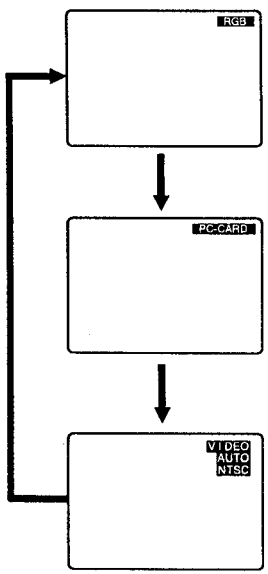
■ Changing the input signal

Press the INPUT button

(LCD projector) (Remote Control unit)



The input source for picture signals and the corresponding audio signals can be changed by pressing the INPUT buttons on the projector operating panel or on the remote control unit. In addition, the name of the input source selected will be displayed on the screen for approximately 5 seconds.



The signal from the source which is connected to the RGB connector is projected.

The signal from the source which is connected to the PC-CARD IN connector is projected.

The signal from the source which is connected to the S-VIDEO IN connector or VIDEO IN connector is projected.

If cables are connected to both connectors, the S-VIDEO signal will be selected automatically. (The S-VIDEO signal has priority.)

Note:

- The LCD projector is factory set so that the proper input must be selected manually with the INPUT button. For automatic input selection according to input signal, refer to "Using Auto Input Select Feature".
- To turn off the input signal on-screen display, please see "Turning off the input signal display".
- If you would like to project the VIDEO signals being input to the VIDEO IN connector, do not connect any cables to the S-VIDEO IN connector.
- There is only one audio system circuit provided for the VIDEO AUDIO IN terminals for S-VIDEO and VIDEO signals. Because of this, if using both S-VIDEO signals and VIDEO signals, it will be necessary to change over the connectors.
- The LCD projector is shipped from the factory with the system format selection function set to "AUTO (NTSC, PAL, SECAM)". If the correct picture is not projected when VIDEO signal is input and it is necessary to change the input to match the input signal, refer to "S-VIDEO/VIDEO Signal Format Selection".
- When RGB signal is input, please input the registered signals.

■ RGB Signals that can be Input

The projection mode will be matched automatically to one of the modes which have been pre-set inside the projector.
If a signal which differs greatly from any of the types listed below is input, the picture image may not be displayed correctly, or a blue background may be displayed.

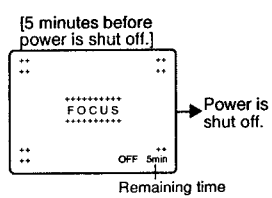
Display mode name	Signal data			
	No. of dots	Horizontal frequency (kHz)	Vertical frequency (Hz)	Dot clock frequency (MHz)
VGA350 (70Hz)	640 X 350	31.47	70.08	25.175
VGA400 (70Hz)	640 X 400	31.47	70.08	25.175
VGA480 (60Hz)	640 X 480	31.47	59.94	25.175
Macintosh LC	640 X 480	34.97	66.61	31.334
Macintosh 13˝	640 X 480	35.00	66.67	30.241
VESA350 (85Hz)	640 X 350	37.86	85.08	31.500
VESA400 (85Hz)	640 X 400	37.86	85.08	31.500
VESA480 (72Hz)	640 X 480	37.86	72.81	31.500
VESA480 (75Hz)	640 X 480	37.50	75.00	31.500
VESA480 (85Hz)	640 X 480	43.27	85.01	36.000
SVGA (56Hz)	800 X 600	35.16	56.25	36.000
SVGA (60Hz)	800 X 600	37.88	60.32	40.000
SVGA (72Hz)	800 X 600	48.08	72.19	50.000
SVGA (75Hz)	800 X 600	46.88	75.00	49.500
SVGA (85Hz)	800 X 600	53.67	85.06	56.250
*XGA (60Hz)	1024 X 768	48.36	60.00	65.000
*XGA (70Hz)	1024 X 768	56.48	70.07	75.000
*XGA (75Hz)	1024 X 768	60.02	75.03	78.750
*Macintosh 16˝	832 X 624	49.73	74.55	57.283
*Macintosh 19˝	1024 X 768	60.24	74.93	80.000

*Changing to 800 X 600 may cause a portion of information to omitted, or the image quality to be degraded.

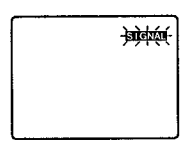
■ Blue Screen with No Input Signal

The LCD projector is equipped with an internal blue screen function which turns the screen blue when the video or computer equipment connected to the input jack is turned off, or when there is nothing connected to the input jack.

- If the power is turned on when no input signal is input to the LCD projector, the screen will turn blue.
  The "FOCUS" overlay appears only until the video or computer equipment is connected to the input jack and turned on. If no input signal is received (the screen is blue) for 15 minutes, the lamp will turn off automatically.



- The at right display will appear when the RGB input is within the LCD projector's frequency range, but is not one of the LCD projector's programmed formats. (As found above.)



- Should an RGB signal be input which is out of the LCD projector's frequency range, no indication will be present.

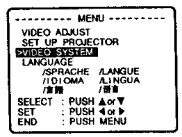
■ VIDEO/S-VIDEO Signal Format Selection

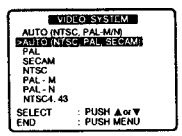
If the correct signal format is not selected and the picture does not appear as normal when VIDEO or S-VIDEO signals are being input, select the format by the following procedure. This function is set to "AUTO (NTSC, PAL, SECAM)" at the time of shipment from the factory, so that the projector can normally be used with this setting left as it is in the Latin America area.

1 **Press MENU** to display the menu.

2 **Press ∧ or ∨** to select VIDEO SYSTEM, **and then < or >** to display the screen.

3 **Press ∧ or ∨** to switch the setting to"AUTO (NTSC, PAL-M/N)", "AUTO (NTSC, PAL, SECAM)", "NTSC", "NTSC4.43", "PAL", "PAL-M", "PAL-N" or "SECAM" until a normal picture is obtained.





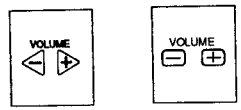
	Horizontal scanning frequency (kHz)	Vertical scanning frequency (Hz)	Colour subcarrier frequency (MHz)
AUTO (NTSC, PAL-M/N)	"NTSC", "PAL-M", or "PAL-N" is selected automatically.		
AUTO (NTSC, PAL, SECAM)	"NTSC", "NTSC4.43", "PAL" or "SECAM" is selected automatically.		
NTSC	15.63	60.00	3.58
NTSC4.43			4.43
PAL-M			3.58
PAL	15.75	50.00	4.43
PAL-N			3.58
SECAM			4.25 or 4.41

Note:
- If using a signal source with poor picture quality, such as a dubbed tape, it may not be possible to get the picture to display properly.
- NTSC and PAL-M have the same scanning frequencies and colour sub-carrier frequencies, but they have different colour modulation methods. Because of this, if the incorrect setting is selected, colour pictures may appear in black-and-white.
- The video system screen is not displayed with no S-VIDEO/VIDEO input signal.
- Press MENU to remove the setup screen and menu.

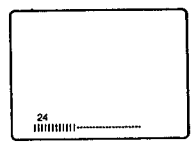
■ Adjusting the Volume

The volume can be adjusted using the VOLUME +/- on the LCD projector or remote control unit.

(LCD projector) **(Remote Control unit)**



- **Press VOLUME +** to turn the volume high.
- **Press VOLUME -** to turn the volume low.

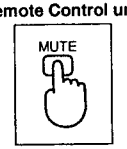


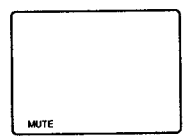
Note:
- The volume level will remain displayed on the screen for approximately 5 seconds.

■ Turning off the sound

If the MUTE button on the remote control unit is pressed, "MUTE" will be displayed on the screen as shown in the illustration below and the sound will be muted. If the MUTE button is pressed once more, the on-screen display will be cleared and the normal sound volume will be restored.

(Remote Control unit)



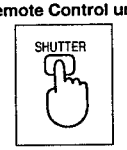


Note:
- If the power supply is turned off or either of the VOLUME +/- buttons is pressed, the mute setting will be cancelled.

■ Turning off the Picture and Sound at the same time

When SHUTTER is pressed on the remote control unit the picture and sound turns off and the screen goes black, Press SHUTTER again to resume picture and sound. You can display a favourite image instead of the black back-screen. Please refer to "Setting the favourite back-screen" to use this feature.

(Remote Control unit)

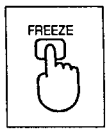


Note:
- When the screen goes black, the picture will not be shown on the screen. However, the picture continues to be sent from the personal computer or video source.

■ *Freezing the picture*

Projection can be switched between a frozen (still) picture and a moving picture each time the FREEZE button on the remote control unit is displayed. Press FREEZE again to resume motion.

(Remote Control unit)

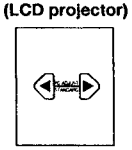


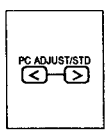
Note:
- The sound is muted while the picture frozen.

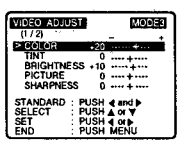
■ Returning adjustment values to the factory default settings (standard values)

If you press < and > at the same time on the remote control unit while the RGB/VIDEO adjust screen or an individual adjustment screen is being displayed, you can return the adjustment value to the standard values set at the factory.

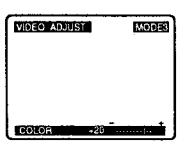
(LCD projector) **(Remote Control unit)**







Press < and > at the same time while the RGB/VIDEO ADJUST screen is displayed.
...All items displayed on-screen will be returned to their standard values.



Press < and > at the same time while an individual adjustment screen is being displayed.
...Only the item being adjusted will be returned to its standard value.

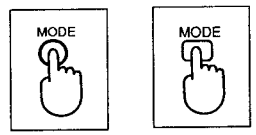
Selecting the Picture Mode

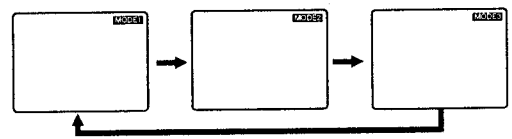
In order to obtain better picture quality, three types of picture mode are available for RGB signals, VIDEO/S-VIDEO signals and PC-Card signals. The three picture mode types are set to the same setting at the factory.
Please refer to "Adjusting the Picture to the Desired Setting", and then properly adjust each mode to the environment or picture.

■ Changing the Picture Mode

You can change the picture mode by pressing MODE on the LCD projector or remote control unit.

(LCD projector) **(Remote Control unit)**



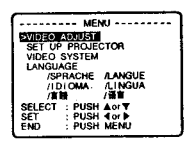


Note:
- Press MODE to display the current mode. From the second press, you can change the mode.
- If the button is not pressed for 5 seconds, the mode on-screen display will disappear.

■ Changing the Mode While the VIDEO ADJUST Screen

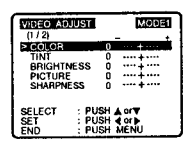
The procedure and on-screen displays below are based on S-VIDEO/VIDEO as the input signal.

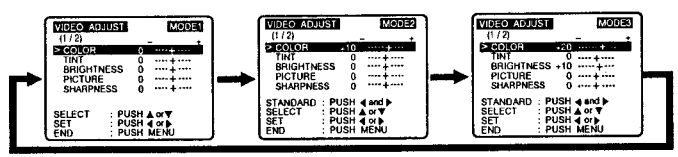
1 Press MENU to display the menu.



2 Press v or ∧ to select "VIDEO ADJUST", and then < or > to display the screen.

3 Press MODE to change the mode.
- Each press of MODE will change the mode as shown below.





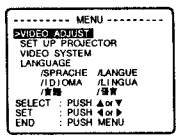
Note:
- Press MENU to remove the setup screen and menu.

Adjusting the Picture to the Desired Setting

To obtain better picture quality, use the MODE button and adjust each of the selected modes to the desired picture.
The items which can be adjusted vary depending on the type of input signal. The adjustment procedure below describes the on-screen displays when the S-VIDEO signal or the VIDEO signal is being projected.

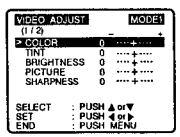
1 **Press MENU** to display the menu.

2 **Press ∨ or ∧** to select "VIDEO ADJUST", and then < or > to display the screen.
- (1/2) or (2/2) displayed under "VIDEO ADJUST" indicates that the first or second of two setting screens is displayed.



3 **Press ∨ or ∧** to select "COLOR".

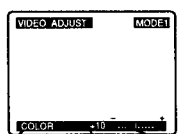
Note:
- Press ∧ in the "COLOR" item or ∨ in the "SHARPNESS" item to display the sub colour screen and image quality screen. You can adjust the white balance in the sub colour adjust screen.
- You can select NATURAL or DYNAMIC image quality in the image quality screen.



4 **Press < or >** to display the COLOR individual adjustment screen.

5 **Press < or >** to adjust the colour. The current setting will be displayed on the screen by numerals and a bar.

Note:
- Depending on the adjustment item, the adjust procedure and adjustment will vary. Please refer to the chart below.



Adjustment item	Button	Adjustment Details	Adjustment Range	Remarks
COLOR	Press > button.	The colour becomes deeper.	Max. value 30	S-VIDEO/VIDEO only
	Press < button.	The colour becomes paler.	Min. value -30	
TINT	Press > button.	Flesh tones become greenish.	Max. value 40	NTSC, NTSC 4.43 (S-VIDEO/VIDEO) only
	Press < button.	Flesh tones become reddish.	Min. value -40	
BRIGHTNESS	Press > button.	The screen becomes brighter.	Max. value 30	
	Press < button.	The screen becomes darker.	Min. value -30	
PICTURE	Press > button.	The screen becomes brighter and the picture becomes deeper.	Max. value 30	
	Press < button.	The screen becomes darker and the picture becomes paler.	Min. value -30	
SHARPNESS	Press > button.	The picture quality becomes sharper.	Max. value 20	S-VIDEO/VIDEO only
	Press < button.	The picture quality becomes softer.	Min. value -20	

Note:
- The last adjustment condition is saved and will not be erased even if the power is turned off.
- Press MENU to remove the setup screen and menu.
- If < and > are pressed together while the video adjust screen or individual adjustment screen is displayed, the adjustment condition of the adjust items currently displayed on-screen will return to the factory setting.
- The different adjustment condition cannot be saved for S-VIDEO and VIDEO.

Adjusting the White Balance

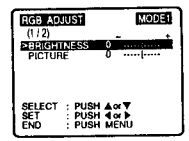
The picture may become over-saturated with red or blue colour, and the white colour may not be at the desired degree of whiteness. In such cases, adjust the white balance by the following procedure.

■ Adjustment procedure (for white balance adjustment of the red component)

1 **Press MENU** to display the menu.

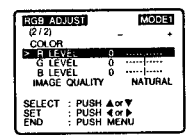
2 **Press ∧ or ∨** to select "RGB ADJUST", **and < or >** to display the screen.

Note:
- (1/2) or (2/2) displayed under "RGB ADJUST" indicates that the first or second of two setting screens is displayed.



3 **Press ∧ or ∨** to select "R LEVEL".

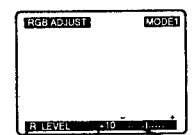
Note:
- Press ∧ in the "BRIGHTNESS" item or ∨ in the "PICTURE" item to display colour adjust screen (2/2).



4 **Press < or >** to display the R LEVEL individual adjustment screen.

5 **Press < or >** to adjust the R LEVEL setting.
- The current setting will be displayed on the screen by numerals and a bar.

Note:
- Depending on the adjustment item, the adjust procedure and adjustment will vary. Please refer to the chart below.



Adjustment Item	Button	Adjustment Details	Adjustment Range
R LEVEL	Press > button.	The red component becomes stronger.	Max. value 30 Min. value -30
	Press < button.	The red component becomes weaker.	
G LEVEL	Press > button.	The green component becomes stronger.	
	Press < button.	The green component becomes weaker.	
B LEVEL	Press > button.	The blue component becomes stronger.	
	Press < button.	The blue component becomes weaker.	

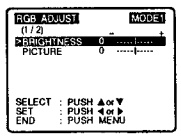
Note:
- Press MENU to remove the setup screen and menu.
- If < and > are pressed together while the video adjust screen or individual adjustment screen is displayed, the adjustment condition of the adjust items currently displayed on-screen will return to the factory setting.

Selecting the Image Quality

This LCD projector can select NATURAL or DYNAMIC as the special characteristic of image quality.
Follow the instructions below to select the image qualities you prefer.
The procedure and on-screen displays below are based on RGB as the input signal.

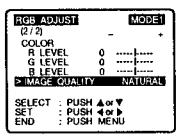
1 **Press MENU** to display the menu.

2 **Press ∧ or ∨** to select "RGB ADJUST", **and < or >** to display the screen.



Note:
- (1/2) or (2/2) displayed under "RGB ADJUST" indicates that the first or second of two setting screens is displayed.

3 **Press ∧ or ∨** to select "IMAGE QUALITY".



Note:
- You can change the setting screen by pressing ∧ when the cursor is at the first item on the screen, or ∨ when the cursor is at the last item on the screen.

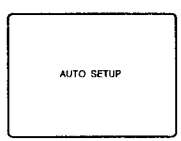
4 **Press < or >** to select the image quality.
- NATURAL is the factory S-VIDEO/VIDEO input signal setting.
- DYNAMIC is the factory RGB or PC-CARD input signal setting.

Using the Auto Setup feature

When RGB input signal picture is projected from a PC (Personal Computer). It is possible to adjust the vertical position, horizontal position, horizontal size and phase automatically. (This only applies for RGB input signal.)
Please follow the instructions below.

1 **Input the signal** of the full-screen projection image from the connected device, and then project it.

2 **Press < and >** at the same time to start the auto setup feature.



- AUTO SETUP screen is displayed.
- AUTO SETUP screen disappears when auto setup feature is ended.
- Operating buttons, except the POWER button, become invalid during Auto setup.

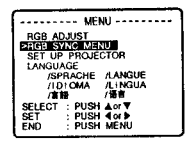
Note:
- Adjusted settings are saved as is even if power is turned off.
- Auto setup may not be possible if the input image is not clearly visible on the side of the screen, dark, or monotonous. In this case, adjust the image position, horizontal size, and phase.
- If a signal other than the proper RGB input signal is input, "SIGNAL" is displayed on-screen indicating that auto setup is not possible.
- Of the RGB signals that can be input, if the signal has a vertical dots of less than 480, "SIGNAL" is displayed indicating that auto setup cannot be performed.
- In some cases, auto setup may take about 80 seconds.

Adjusting the Image Position, Horizontal Size and Phase

Confirm the picture position, horizontal size, and phase. If the picture is not correctly positioned within the display area of the screen (the edge of the picture does not appear), adjust the picture position. (This only applies for RGB input signal.)

■ When adjusting the Vertical Position (V POSI)

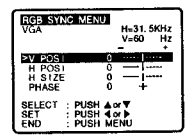
1 **Press MENU** to display the menu.



2 **Press ∧ or ∨** to select "RGB SYNC MENU", **and < or >** to display the screen.

Note:
- RGB signal, the name of mode, and Horizontal/Vertical scanning frequency will appear in the top corner of the screen.

3 **Press ∧ or ∨** to select "V POSI".

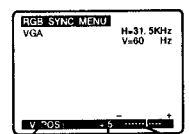


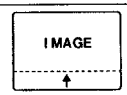
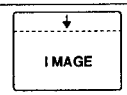
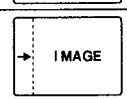
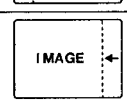
Note:
- When adjusting the horizontal position, horizontal size, and phase, move the arrow to the item you want to adjust.

4 **Press < or >** to display the V POSI individual adjustment screen.

5 **Press < or >** to adjust the V POSI setting.
- The current setting will be displayed on the screen by numerals and a bar.

Note:
- Depending on the adjustment item, the adjust procedure and adjustment will vary. Please refer to the chart below.



Adjustment Item	Button	Adjustment details	Adjustment range
V POSI	Press > button.	The image moves up. 	Max. value +30
	Press < button.	The image moves down. 	Min. value -30 (The value differs with each input signal.)
H POSI	Press > button.	The image moves to the right. 	Max. value +50
	Press < button.	The image moves to the left. 	Min. value -50
H SIZE	Adjust the dot clock of the personal computer and the LCD projector to eliminate vertical stripe, etc. from the screen.		Max. value +90 Min. value -50
PHASE	You can use this adjustment to eliminate the flicker (localised noise) that appears on the computer screens.		Max. value +31 Min. value 0

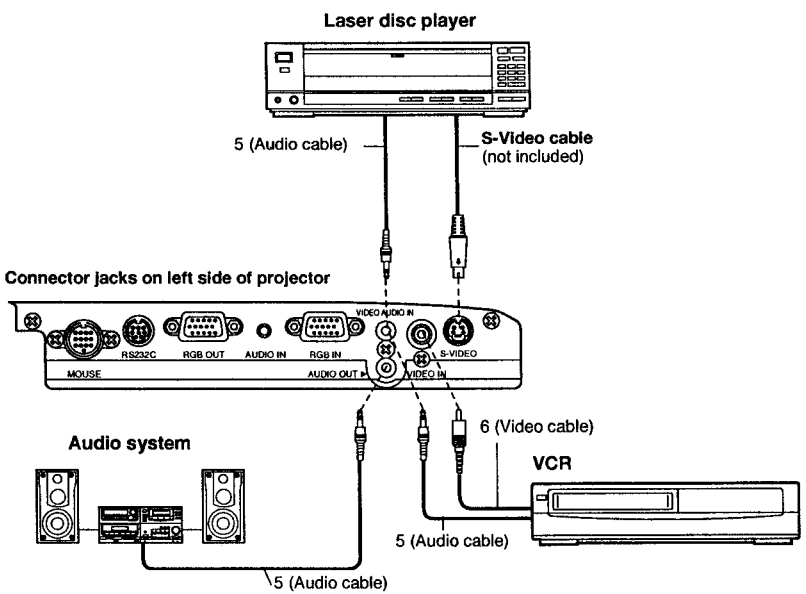
Note:
- The last adjustment condition is saved and will not be erased even if the power is turned off.
- Press MENU to remove the setup screen and menu.

System Configuration Example

Notes on system configuration

- Turn off the power supply of each system component before connecting any of the components.
- Read the instruction manual for each system component before connecting it.
- If the necessary cables for connecting any system component are not supplied with the component or available as an option, you may need to fashion a cable to suit the component concerned.
- If there is a lot of jitter in the video signal input from the video source, the picture on the screen may flicker. In such cases, it will be necessary to connect a TBC (time base corrector).
- The projector can be connected to video signal sources which out put VIDEO, S-VIDEO and analoque RGB signals.
- The projector has built-in speaker. However, you will need to connect a separate audio system to the AUDIO OUT terminal if your needs specify high sound volumes.
- It may not be possible to connect some types of computer.

■ Example of connection to audio-visual equipment

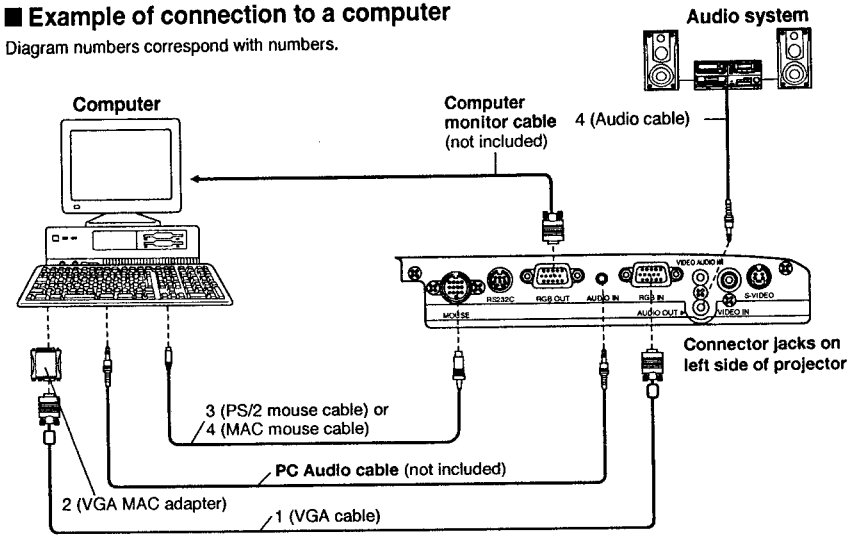


Note:

- If the S-VIDEO and VIDEO IN terminals are both connected at the same time, the S-VIDEO signal input will have priority. If you wish to view the signal being input to the VIDEO IN terminal, disconnect the plug from the S-VIDEO terminal.
- Only one audio signal input system is available for the VIDEO AUDIO IN terminal for S-VIDEO/VIDEO signals, so if you wish to change the audio input source, you will need to remove and insert the appropriate plugs.
- If an audio system is connected to the AUDIO OUT terminal, muting can be controlled by the remote control unit which is supplied with the projector.
- If the video signal source is connected using a cable with a BNC junction plug, use the BNC/RCA adapter (not included) to convert the pin jack.

■ Example of connection to a computer

Diagram numbers correspond with numbers.



Note:

- The RGB input accepts signals from VGA, SVGA, XGA (Compression), and MAC compatible computers without the need for any additional hardware.
- Plug the VGA signal cable (supplied) correctly into the RGB IN terminal on the LCD projector and the RGB signal output terminal on your computer. Secure the plugs by tightening the thumb screws.

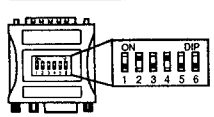
  When connecting the LCD projector to a Macintosh series computer, first connect the VGA/MAC adaptor (supplied) to the RGB-signal input terminal on your computer. Then, firmly plug the VGA signal cable into both the RGB IN terminal on the LCD projector and the VGA/MAC adaptor on the computer. Secure the plugs by tightening the thumb screws. Be sure to set the DIP switch on the VGA-MAC adapter to your display type.
- To view images simultaneously on the monitor and projection screen, connect your computer monitor to the LCD projector's RGB OUT terminal.
- When the LCD projector is connected to personal computer, you can use the remote control unit in place of the computer's mouse by attaching the mouse cable.
- If you wish to use the wireless mouse function, turn on the main power to the projector before turning on the personal computer.
- When connecting the LCD projector to a compatible computer other than a VGA, SVGA, XGA (Compression), or Macintosh series, a separate cable is needed.
- If you wish to use the plug & play function, turn on the MAIN power switch on the LCD projector before turning on the computer.

[VGA-MAC adapter]
[Setting the DIP switches]

RESOLUTION	DIP-SWITCHES 1	2	3	4	5	6
"21" MULTIMODE	●	●				●
"17" MULTIMODE	●	●			●	
"13" MULTIMODE	●	●			●	●
VGA/SVGA MODE			●	●		
21" 1152X870	●	●	●	●		
19" 1024X768		●	●			
16" 832X624		●		●		
13" 640X480	●	●				

LEGEND
* : SUPPORTS APPLE MULTIPLE SCAN SOFTWARE
●: ON

Find the resolution of your display type on the table shown left (also on the adaptor). Then, set each DIP switch that is indicated by a "●" mark to ON.

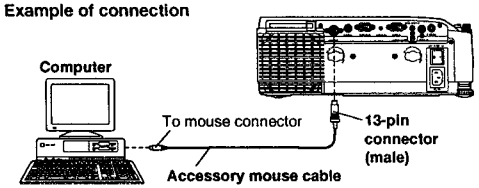


Example: If your display type is 16", set DIP switches 2 and 4 on the VGA-MAC adaptor to ON. By doing so, the signal will travel through switches 2 and 4, and Pin No. 4 to 10 as shown in the signal chart above.

Wireless mouse

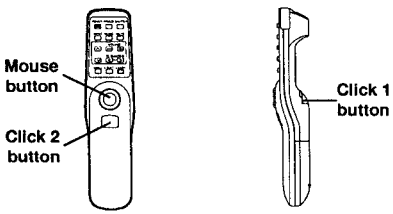
A wireless mouse function is provided. This function lets you use the remote control unit to control a personal computer in place of the personal computer's mouse. This is done by connecting the projector to a personal computer using the mouse cable which is supplied with the projector.
The LCD projector is compatible with the following types of mouse only. Other types of mouse cannot be used.
(PS/2 mouse, Macintosh mouse, Serial mouse)

Example of connection



Note:
- Different mouse cables are used for different types of computers. Therefore, do not use any mouse cables other than the supplied mouse cables.

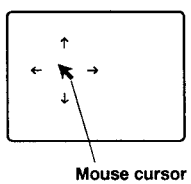
<Remote Control unit>



Mouse button: While gently pressing the mouse button with you thumb, push the pointer button back and forward and to the left and right. The mouse cursor will move back and forward and to the left and right on the screen.

Click 1 button: This button corresponds to the button on a single-button mouse, or to the left button on a standard mouse with two buttons.

Click 2 button: This button corresponds to the right button on a standard mouse with two buttons.



Video/ Computer Cables & Adaptors

These accessories are supplied in order to connect the LCD projector to Computer/ AV equipment. The numbers in the left column correspond with the numbers in the connection diagrams.

No.	CABLE/ADAPTOR	PORT		LENGTH
		Projector side	Computer/AV products side	
1	VGA cable	D-Sub mini 15-pin (male)	D-Sub mini 15-pin (male)	2.0 m (6.56 ft)
2	VGA MAC adaptor	D-Sub mini 15-pin (female)	MAC D-Sub 15-pin (male)	—
3	PS/2 mouse cable	13-pin round (male)	DIN 6-pin (male)	2.0 m (6.56ft)
4	MAC mouse cable	13-pin round (male)	DIN 4-pin (male)	2.0m (6.56ft)
5	Audio cable	M3 stereo mini pin (male)	RCA pin (male) X 2	1.5 m (4.92ft)
6	Video cable	RCA pin (male)	RCA pin (male)	1.5 m (4.92ft)

Projecting PC-Card (ATA Flash Card) Data

Using this software, "JPEG Viewer", you can save the image displayed on the PC screen as a JPEG file, to a PC-Card (ATA Flash Card). And if you insert the PC-Card into the LCD projector, you can project using the JPEG image playback feature.
Please follow the below instructions to use this feature.

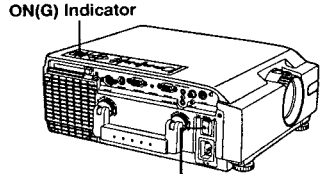
Note:
Some ATA Flash Cards may not work with the LCD projector.
The following manufacturer PC-Cards have been verified compatible.

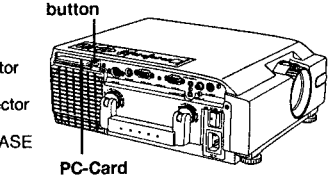
Panasonic, HITACHI, TDK, SanDisk, EPSON, Simple Technology

■ Projecting PC-Card Data

Follow the instructions below when projecting image data saved on a PC-Card.
(See "JPEG Viewer Feature".)

<LCD projector>





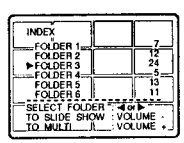
1 Turn on the LCD projector to start projecting.
(See "Turning the POWER on and off".)

2 Insert PC-Card into PC-Card slot on the LCD projector.
Then, press INPUT on the LCD projector or remote control unit and select PC-CARD.
- The INDEX and first image in each FOLDER are shown.

Note:
- It takes a few seconds for the list of images to be displayed. (**WAIT...** appears.) If you made JPEG files with something other than JPEG Viewer, it may take a much longer time to display the list of images.
  See "When using BMP or JPEG→ JPEG Converter feature", and convert to JPEG files ideally suited to the LCD projector.
- If you made FOLDER with something other than JPEG Viewer, FOLDER-A, FOLDER-B, ... will be displayed.
- "ROOT" is displayed if images corresponding to the LCD projector are found in root.
- The screen turns blue if images corresponding to the LCD projector are not found in PC-Card.
- When you want to eject the PC-Card, press the PC-Card RELEASE button. And "NO CARD" screen is displayed.

3 Press < or > to select FOLDER.
Press > to select the next FOLDER.
Press < to select the previous FOLDER.
- The selected FOLDER is indicated by a red arrow.
- The selected image in FOLDER is encircled by a bold, blue frame.

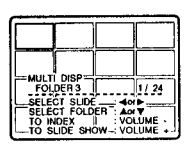
Note:
- Press VOLUME- to play back the first image of the selected FOLDER.



4 Press VOLUME+ to decide FOLDER.
- A list of images will be displayed.

5 Press < or > to select an image.
- The selected image is encircled by a bold, blue frame, and the FOLDER name and number is displayed.

Note:
- Press ∨ or ∧ to change the selected FOLDER. And, press VOLUME- to display the INDEX.

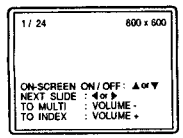


6 Press VOLUME+ to project the selected image.

- Press < or > to project the images one by one.
  >: The next image is projected.
  <: The previous image is projected.

Note:

- Press VOLUME- when playing back to return the screen to the list of images.
- Press VOLUME+ during playback to display the INDEX.
- Press ∨ or ∧ during playback to display the file size (ex. 800 x 600 dots), and the operating instructions.
- Press ∨ or ∧ again to turn off the display.



■ When using the Repeat Play

The LCD projector can automatically play back images one by one in the selected FOLDER. And, you can select the length of time each image is played back.

1 Press MENU to display the menu.

2 Press ∨ or ∧ to select "SET UP PC-CARD", **and < or >** to display the screen.

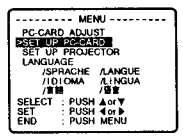
3 Press ∨ or ∧ to select "REPEAT PLAY".

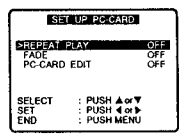
4 Press < or > repeatedly to select the length of time each image is played back.

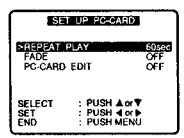
- Playback length of 5sec., 10sec., 30sec., 60sec., 120sec. can be selected.

Note:

- Repeat Play can only be used in the selected FOLDER.
- You cannot select images while Repeat Play is in progress. Follow the instructions above to select "OFF". And then, select an image.







■ Using the Fade Feature

With the Fade feature, instead of instantly changing from image to image, the previous image is gradually darkened (FADE OUT), and the next image is gradually lightened (FADE IN).
Please follow the instructions below to use this feature.

1 Press MENU to display the menu.

2 Press ∨ or ∧ to select "SET UP PC-CARD", **and < or >** to display the screen.

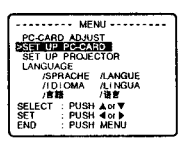
3 Press ∨ or ∧ to select "FADE".

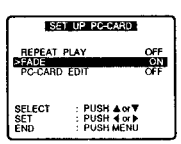
4 Press < or > to select "ON".

- If you select "OFF", the images change instantly. (This is the factory setting.)

Note:

- Press MENU to remove the setup screen and menu.



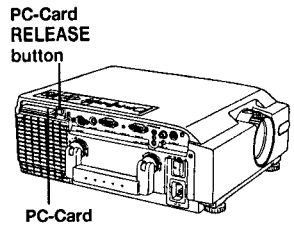


Saving the Image Data to PC-Card (applies to LCD projector only)

■ Saving the current projected picture to a PC-Card

When a PC-Card is inserted into the LCD projector, the current projected picture, from RGB or S-VIDEO/VIDEO input signal, can be recorded to the PC-Card as a JPEG file.
Follow the instructions below to set a FOLDER and record a picture.

1 Insert a PC-Card into the LCD projector.



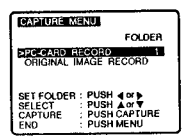
2 Press INPUT and select RGB or S-VIDEO/VIDEO input to project the images you want to record.

3 Press CAPTURE on the LCD projector to display the capture menu.

- The screen is frozen and the screen at right will appear.

Note:

- Of the RGB signals that can be input, if the signal has a vertical dots of less than 480, "SIGNAL" is displayed indicating that capture cannot be performed.



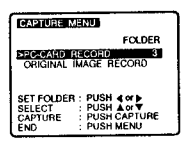
4 Press ∨ or ∧ to move the arrow to PC-CARD RECORD.

5 Press < or > to set the FOLDER No. in which pictures will be recorded.

- Select from FOLDER No. 1 to 16. (No. 1 is the Default setting.) If the PC-Card is changed, the setting reverts back to the factory setting.

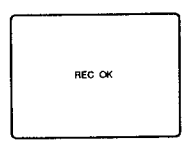
Note:

- The FOLDER No. set above is active as long as no changes are made.
- If the PC-Card is changed, the setting reverts back to the factory setting.



6 Press CAPTURE on the LCD projector.

- The current projected picture is recorded in the set PC-Card FOLDER. "REC OK" is displayed when recording is completed.
- If the image is captured from a moving video, the image will be frozen.
- Do not remove PC-Card from slot until recording is complete.



Note:

- If you attempt to record an image which surpasses the card remaining memory capacity, "REC NG" is displayed and recording will not be performed.
- The file size is saved as SVGA (800 X 600) when VGA (640 X 480) input is enlarged and when XGA (1024 X 768) is input.
- When recording RGB input signal to a PC-Card, please refer to adjust the image position, horizontal size, and phase to obtain a good projected picture. The picture is saved in the same condition it was projected.
- When adjusting the image in VIDEO ADJUST or RGB ADJUST, only BRIGHTNESS adjust is not reflected in the recorded image. Adjust the image with BRIGHTNESS level at 0.
- Regarding "Selecting the Image Quality (NATURAL/DYNAMIC)", it is best to select the same image quality as when PC-CARD is the input signal. If a different image quality is selected and the picture is recorded to a PC-Card, the image appearance will differ when projected.
- Press MENU to remove the setup screen and menu.

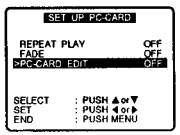
■ Editing the Image File of a PC-Card

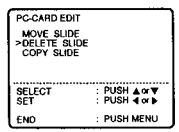
The image file saved in a PC-Card can be edited (delete, move, copy) at the LCD projector, while watching the projected multi-picture displays, without using a personal computer.

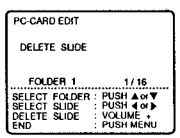
Note:

- Only picture files made with the personal computer software JPEG Viewer included with the LCD projector and the capture feature of the LCD projector can be edited. Please see regarding JPEG Viewer, or regarding capture feature.
- The PC-CARD EDIT mode cannot be set if Repeat play is on. Set Repeat play to off before editing.

Deleting a slide (image file)







1 Press MENU to display the menu.

2 Press ∨ or ∧ to select "SET UP PC-CARD", **and then < or >** to display the screen.

3 Press ∨ or ∧ to select "PC-CARD EDIT", **and then < or >** to display the screen.

Note:

- A multi-picture screen of the selected FOLDER is displayed.

4 Press ∨ or ∧ to select "DELETE SLIDE", **and then < or >** to display the menu.

Note:

- Press MENU to finish editing and return to the normal screen.

5 Press ∨ , ∧ , < or > to select the slide you want to delete.

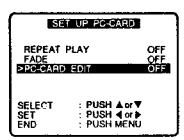
6 Press VOLUME+ to delete the selected slide.

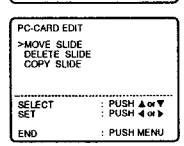
- When the selected slide is deleted, the "PC-CARD EDIT" screen in step 3 is redisplayed.

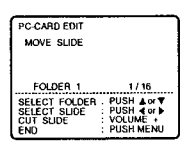
Note:

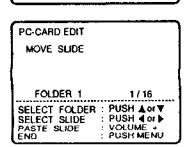
- Once deleted a slide cannot be restored.

Moving a slide (image file)









1 Press MENU to display the menu.

2 Press ∨ or ∧ to select "SET UP PC-CARD", **and then < or >** to display the screen.

3 Press ∨ or ∧ to select "PC-CARD EDIT", **and then < or >** to display the screen.

Note:

- A multi-picture screen of the selected FOLDER is displayed.

4 Press ∨ or ∧ to select "MOVE SLIDE", **and then < or >** to display the menu.

Note:

- Press MENU to finish editing and return to the normal screen.

5 Press ∨ , ∧ , < or > to select the slide you want to move.

6 Press VOLUME+ to select the slide to cut.

Note:

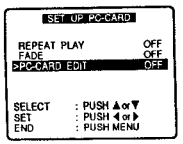
- In this step, the slide to be moved is decided only. It cannot be cut until it is pasted.
- If you want to change your slide selection, press MENU after pressing VOLUME+.

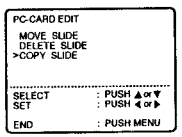
7 Press ∨ , ∧ , < or > to select the place to move.

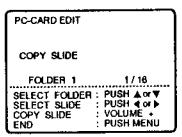
8 Press VOLUME+ to paste the cut slide.

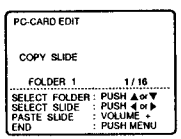
- The cut slide is inserted in front of the selected slide and the *"PC-CARD EDIT" screen in step 3 is redisplayed.*

Copying a slide (image file)









1 Press MENU to display the menu.

2 Press ∨ or ∧ to select "SET UP PC-CARD", **and then < or >** to display the screen.

3 Press ∨ or ∧ to select "PC-CARD EDIT", **and then < or >** to display the screen.

Note:

- A multi-picture screen of the selected FOLDER is displayed.

4 Press ∨ or ∧ to select "COPY SLIDE", **and then < or >** to display the menu.

Note:

- Press MENU to finish editing and return to the normal screen.

5 Press ∨ , ∧ , < or > to select the slide you want to copy.

6 Press VOLUME+ to select the slide to copy.

Note:

- If you want to change your slide selection, press MENU after pressing VOLUME+.

7 Press ∨ , ∧ , < or > to select the place to paste.

8 Press VOLUME+ to select the place to paste.

- The copied slide is inserted in front of the selected slide, and the "PC-CARD EDIT" screen in step 3 is redisplayed.

JPEG Viewer Feature

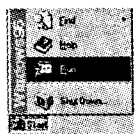
System Requirements:

- IBM PC/AT or compatible
- Microsoft Windows 95, Windows 98
- RAM: 16MB or more recommended
- 2 MB available hard disk space
- 3.5 inch 1.44MB floppy disk drive (for installation)
- PCMCIA Type II slot

Note:
- It is possible that the supplied software will not operate correctly, depending on the Hardware configuration of the PC (Personal Computer) and sharing of resources by other applications software.
- Specifications of these software are subject to change without notice.

■ JPEG Viewer Installation

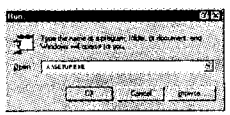
EX. Windows 95



1 Turn on the PC (Personal Computer) and start up Windows 95.

2 Insert the floppy disk (JPEG Viewer software) into a floppy disk drive.

3 Select [Run...] from the Windows 95 start menu.



4 Type in [A:\SETUP.EXE] and click OK.
- It is assumed that your 3.5 inch 1.44MB floppy disk drive is assigned as "A" drive. If not, replace "A" with the appropriate letter.

5 Follow the instructions as they appear on your PC screen.

■ How to make JPEG files

You can make JPEG files using the installed JPEG Viewer software.

Capture feature : You can save captured image of your PC (Personal Computer) screen as JPEG files. (See "When using the Capture feature".)

Note:
Existing BMP or JPEG files must be converted and saved as JPEG files ideally suited to the LCD projector when projecting with the LCD projector.
(See "When using BMP or JPEG→ JPEG Converter feature".)

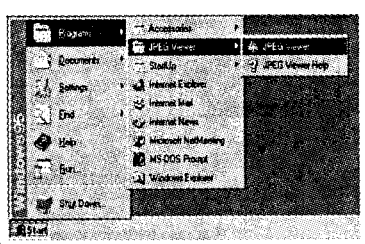
Starting up the JPEG Viewer

EX. Windows 95

1 Turn on the PC (Personal Computer) and start up Windows 95.

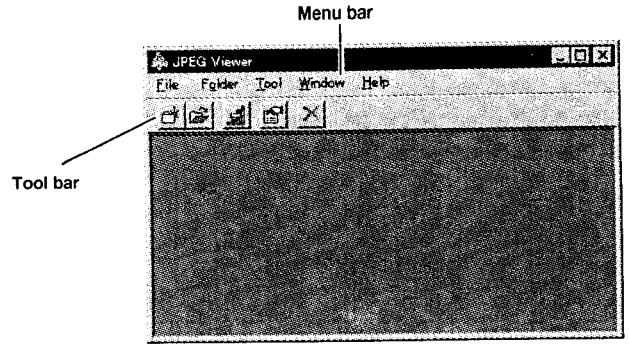
2 Insert the PC-Card (ATA Flash Card is not supplied.) into the PC-Card slot on your PC.

Note:
- When you purchase a PC-Card, format it normally on Windows 95 before use.



3 Select [Start] → [Programs] →[JPEG Viewer] →[JPEG Viewer] to open the JPEG Viewer application.

Functions of each Menu



Following are the Menus and their functions contained in this software.

File
- **Add Graphic file to Folder** ..... Converts an original BMP or JPEG file to a JPEG file and saves it to Folder.
- **Delete Graphic file from Folder** ..... Deletes selected images from Folder.
- **Exit** ..... Exits the JPEG Viewer.

Folder
- **New** ..... Makes new Folder.
- **Open** ..... Opens saved Folder.
- **Close** ..... Closes edited Folder.
- **Delete Folder** ..... Deletes edited Folder.

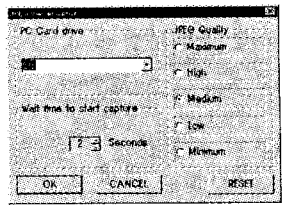
Tool
- **Capture** ..... Changes to the Capture mode.
- **Remake Thumbnail** ..... Remakes Thumbnail files of images contained in the current being edited Folder.
- **Option** ..... Sets the JPEG Viewer.

Window
- **Cascade** ..... Arranges windows in an overlapping pattern.
- **Tile Horizontal** ..... Arranges windows in a top to bottom pattern.
- **Tile Vertical** ..... Arranges windows in a left to right pattern.
- **Arrange Icons** ..... Arranges minimised windows.

Help
- **JPEG Viewer Help** ..... Displays JPEG Viewer help.
- **Version Information** ..... Displays the version information.

When using the Capture feature

1 Select [Option] from the [Tool] menu, and set the drive and JPEG quality for saving captured images.

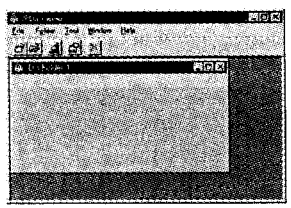


•PC-Card drive
Select the PC-Card drive for saving images.

•Wait time to start capture
Set the waiting time from when Capture is clicked until capturing the actual image starts. Select from 1 to 10 seconds.

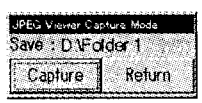
•JPEG Quality
Set the picture quality of JPEG files to one of 5 levels.
(Please refer to Help for more details.)
Note:
The setting changes back to the Default setting when RESET button is clicked.

2 Select [New] or [Open] from the [Folder] menu, and then open Folder for saving images.



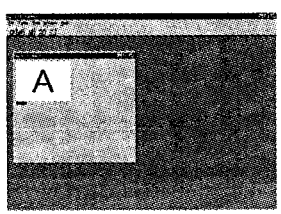
Note:
- The Folder is also opened if you click [New] or [Open] shortcut button on the toolbar.
- When creating new Folder, a consecutive number is automatically assigned to the Folder name.
  Folder1, Folder2, ...
  Do not change the Folder name.

3 Select [Capture] from the [Tool] menu to display the Capture dialogue box.



Note:
- The dialogue box will also be displayed if you click [Capture] shortcut button on the toolbar.
- The Capture dialogue box is always displayed before other application screens, and the main window is minimised.

4 Start up the PC application software and display the image you want to capture on the screen.



5 Click [Capture] button in the Capture dialogue box. The displayed image will be saved to the selected Folder in JPEG format.

Note:
- The images of the Capture dialogue box are not saved.
- File names will be automatically assigned consecutive numbers whenever saved, and thumbnail files will be made.
  Thumbnail files are used when displaying a list of images in this LCD projector or in this software.
  JPEG file : Aut_0001.jpg, Aut_0002.jpg, ...
  Thumbnail file : Thm_0001.jpg, Thm_0002.jpg, ...
  Do not change these file names.
- Pressing [Return] button in the Capture dialogue box will close this dialogue box.
  The main window will be displayed. The saved image will be displayed in the Folder.

■ Size of the Projected Screen

- Because the projection image from this projector is SVGA (800 x 600 dots), XGA image will be compressed. More than XGA image will not be displayed.
- If the picture file is less than VGA (640 x 480 dots) and the expanded projection feature is on, the picture will expand as follows; 640 —> 800, 480 —> 600
- For the best picture quality, it is recommend that JPEG files be 800 x 600 dot in size.
- The larger the file size, the longer it takes (from when < or > is pressed) to project the picture.

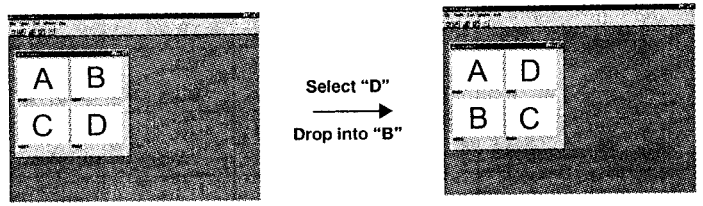
■ How to edit using the Album Display feature

While confirming images displayed in an album, you can change the image display order and move images to another Folder using simple mouse operations.

Changing the image display order in Folder

1 **Select the image** you want to move.

2 **Drag the selected image and drop it in an image** in the desired location.
- The selected image is inserted in front of the image it was dropped into.
- The file name numbers are renewed automatically.

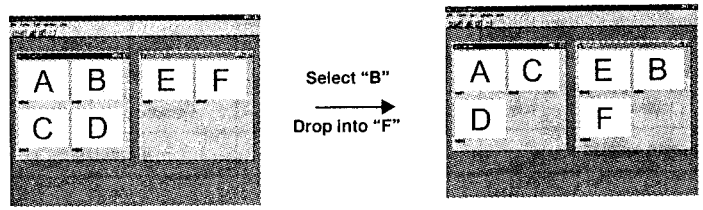


Moving the images between Folders

1 **Open the Folder** containing the image to be moved and the destination Folder.

2 **Select the image** you want to move.

3 **Drag the selected image and drop it** in the destination Folder.
- The selected image is inserted in front of the image it was dropped into.
- The file numbers are renewed automatically.



Display full-screen images for confirmation

Double click the image you want to confirm.
- The image fills the entire screen.

Note:
- Click the mouse or press any button on the keyboard to return the screen to the Album Display.

Deleting images

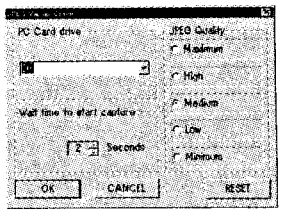
1 **Select the image** you want to delete.

2 **Select [Delete Graphic file from Folder]** from [File] menu.
- The image will be deleted from Folder.

Note:
- You can also delete the selected image if you press the [Delete Graphic file from Folder] shortcut button on the toolbar.

When using BMP or JPEG→ JPEG Converter feature

1 Select [Option] from the [Tool] menu, and set the drive and JPEG quality for saving converted images.

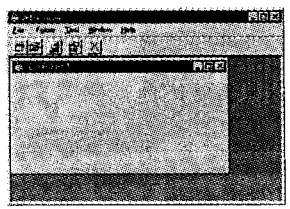


●PC-Card drive
Select the PC-Card drive for saving images.

●Wait time to start capture
This feature is not applicable.

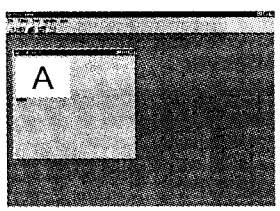
●JPEG Quality
Set the picture quality of JPEG files to one of 5 levels.
(Please refer to Help for more details.)
Note:
The setting changes back to the default setting when RESET button is clicked.

2 Select [New] or [Open] from the [Folder] menu, and then open Folder for saving images.



Note:
- The Folder is also opened if you click [New] or [Open] shortcut button on the toolbar.
- When creating new Folder, a consecutive number is automatically assigned to the Folder name.
  Folder1, Folder2, ...
  Do not change the Folder name.

3 Select [Add Graphic file to Folder] from the [File] menu, and designate the BMP (or JPEG) file you want to convert.



- The JPEG Convert Status screen will appear and conversion will begin automatically.
- The converted JPEG file is saved to the selected Folder.

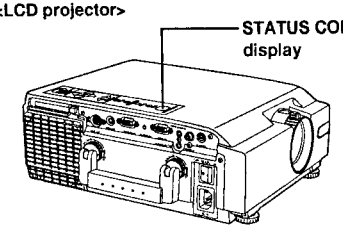
Note:
- File names will be automatically assigned consecutive numbers whenever saved, and thumbnail files will be made. Thumbnail files are used when displaying a list of images in this LCD projector or in this software.
  JPEG file : Aut_0001.jpg, Aut_0002.jpg, ...
  Thumbnail file : Thm_0001.jpg, Thm_0002.jpg, ...
  Do not change these file names.

Status Code Display Indications

■ Warning Indicators

This LCD projector has a STATUS CODE display which calls your attention to problem conditions existing inside the LCD projector. The LCD projector displays a status code indication each time an internal problem is detected. If any of the following indications appear in the STATUS CODE display, immediately turn off the MAIN power switch, and then see the chart to determine a course of action.

<LCD projector>



STATUS CODE	Symptom	Problem	Possible Solution
F-L	Lamp unit automatically turns off due to abnormally high internal temperature. (Stand-by condition)	• Cooling fan malfunction.	• Take the LCD projector to your nearest Service Centre.
F-0		• Misinstalled air filter unit.	• Properly install the air filter unit. • Take the projector to your nearest Service Centre.
A-n		• Temperature sensor malfunction.	• Clean the filter.
A-0		• Clogged air filter. • Blocked air intake. • The surrounding temperature of the place of use may be too high.	• Relocate projector to a proper location. • Place the LCD projector so that surrounding temperature is between 5°C (41°F) and 40°C (104°F) and the humidity is between 10% and 80% (with no condensation). • Take the LCD projector to your nearest Service Centre.
L-n	Lamp does not light up.	• Lamp is burned-out.	• Replace the lamp unit.
P-2		• Lamp Voltage is not correct.	
P-3	Abnormally high internal temperature.	• Abnormal temperature rise.	
P-4		• Other causes.	
L-1	Lamp operation time is over 1000 hours.	• It is nearly time to replace the lamp unit.	
L-0	Lamp operation time is over 1100 hours.	• The lamp unit must be replaced.	
C-d	Forced cooling fan operating to expedite lamp replacement .	——	——

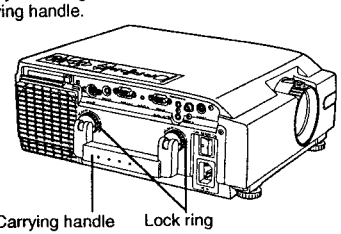
Note:
- Please wait one minute before turning the power back on, to allow the lamp to cool. A much longer time may be required if the projector had attained an abnormally high internal temperature.

Removing and Attaching the Carrying Handle

The LCD projector carrying handle can be removed and attached. When the projector is set up so that it need not be moved, you can decrease the convave-convex of the projector by removing the handle.
Please follow the instructions below to remove and attach the carrying handle.

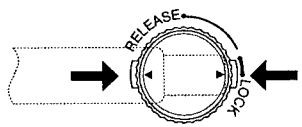
■ When Removing the Carrying handle

Note:
- Remove the handle while in the raised position. Removal is difficult if in the lowered position.



1 **Hold in the two lock buttons,** located on the lock ring at the base of the handle as shown.

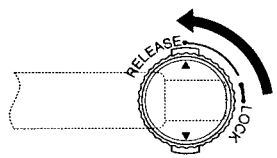
2 **Turn the lock ring** to the left so that the ▲ mark points to RELEASE on the LCD projector.



3 **Repeat steps 1 and 2** and remove the other lock ring.

4 **Slowly pull the carrying handle** straight out from the LCD projector.

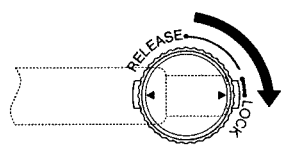
Caution:
- Pull the right and left sides of the carrying handle out equally. If you pull it out forcelly, the joining part of the LCD projector and carrying handle may be damaged.



■ When Attaching the Carrying handle

1 **Insert the carrying handle** into the LCD projector so that the ▲ mark on the lock ling is aligned with RELEASE on the LCD projector.

2 **Hold in the two lock buttons,** located on the lock ring at the base of the handle as shown.



3 **Turn the lock ring** to the right so the ▲ mark points to LOCK on the LCD projector and you hear it click into the locked position. (The lock ring is locked.)

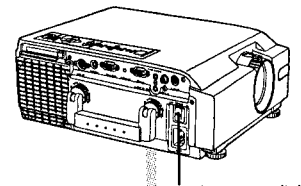
Note:
- Attach the carrying handle securely. If you carry the LCD projector with the carrying handle improperly attached, the handle could come off and damage may result.

4 **Repeat steps 1 and 2** and remove the other rock ring.

Cleaning the Air Filter

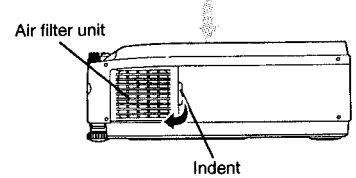
■ Air Filter

The air filter should be cleaned about every 100 hours. Also, clean the air filter if the "A-0" is indicated in the STATUS CODE display.
Replace the filter when it is clogged or dirty even after cleaning.



■ Cleaning procedure

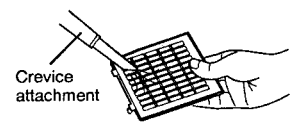
Tools required: Vacuum cleaner.
- Wait until the cooling fan stops and the STANDBY(R) ON(G) indicator turns solid red.



1 Set the MAIN power switch to OFF and unplug the power cord.

2 Place the LCD projector up on its side as illustrated.

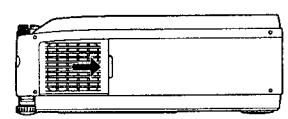
3 Remove the air filter unit
Hold the indent on the air filter unit with your hands and pull the air filter unit out of the LCD projector.



4 Clean the filter.
Gently remove any accumulated dust from air filter unit with your vacuum cleaner.

CAUTION: Operating LCD projector with torn or damaged filter may cause damage to LCD projector.

5 Replace the air filter unit.
Slide the air filter unit into the LCD projector until hollows in the air filter unit are aligned with the hollows in the projector.



Note:
- The LCD projector power cannot be turned on unless the air filter unit is correctly installed.

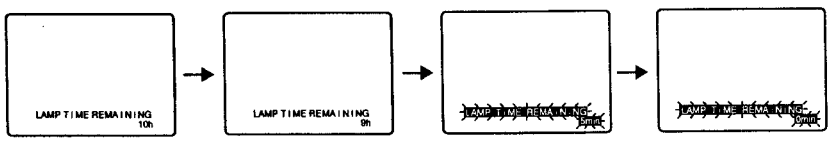
Lamp Replacement

Warning If Status Code "L-n" is displayed on the Status Code display when lamp is not turned on, take the LCD projector to your nearest Service Centre for repair as there is danger of injury due to lamp fragments.

■ Lamp replacement period

The LCD projector lamp has a limited operating life of approximately 1100 hours.
"LAMP TIME REMAINING 10h" will be displayed on-screen when operation time reaches 1090 hours.
Then, each time the power is turned on, the lamp life remaining will be displayed.

- A 10 second warning display (15 seconds when the LCD projector power is turned on) will appear every 1 hour from 1090 hours of operation time. And the warning will flash during the last 5 minutes of lamp life.

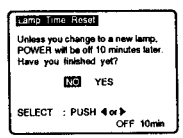


In Case Lamp Use Reaches 1100 hours

The LCD projector will shut itself off and the STATUS CODE indication becomes "L-0". (See STATUS CODE.)

a. Replace the lamp as described .

b. Press POWER ON, the LAMP TIME RESET display will appear to reset the lamp time.
- Only this screen will be displayed when POWER is pressed until lamp time is reset. (The LCD projector cannot display a normal picture.)
- If the lamp time is not reset, this screen will disappear and the LCD projector will shut itself off after about 10 minutes.



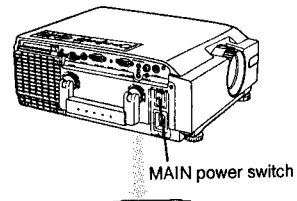
c. Press < or > to select YES.

d. Turn the POWER off to reset the lamp time.

■ Lamp replacement procedure

Caution: Because of possibility of injury, strictly follow the replacement procedure below.

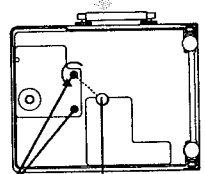
Order lamp ET-LA057.
Tools required: A coin.



1 **After the cooling fan has stopped, and STANDBY(R) ON(G) indicator turns solid red. Set the MAIN power switch to OFF and unplug the power cord.**
Note: Please wait more than one hour for lamp replacement.

[If you need to replace the lamp more urgently]
- The LCD projector has a forced cooling feature. After the POWER switch is turned OFF, and sometime during about the first minute of the normal cooling fan operation, press < and > at same time. The cooling fan will change to high speed for about 10 minutes. (The "C-d" STATUS CODE will be displayed.)

2 **Grabbing the handle, place the LCD projector up on its side as illustrated.**

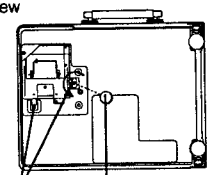


3 **Remove the lamp cover screws.**
First read caution and warning labels on lamp cover. Then, remove the lamp cover screws (2) by using coin, and take off the lamp cover.

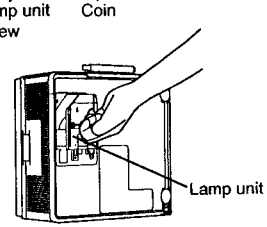
4 **Remove the lamp unit screw.**
Remove the lamp unit screw (2), then grasp the lamp unit handle and carefully pull it from the LCD projector. Keep lamp housing opening to your right. Do not touch lamp or point lamp opening at anyone.

WARNING: The lamp may be hot. Be careful when handling.

CAUTION: •High-pressure lamp may be explode if improperly handled.
•Danger of injury due to lamp fragments.



5 **Install the new lamp unit.**
Remove the lamp ET-LA057 from the LCD projector and install a new lamp unit (ET-LA057).
- Do not drop, impact of dropping may cause lamp to explode.

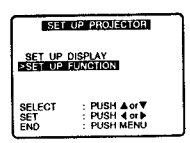


6 **Replace the lamp unit screws.**
Replace the lamp unit screw and the lamp cover screws using a coin to tighten.
- Properly dispose of old lamp.

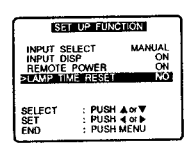
7 **Plug the LCD projector back in by inserting power cord in LCD projector AC socket and set the MAIN power switch to ON.**

8 **Press POWER** to turn LCD projector ON.

9 **Press MENU** to display the menu.



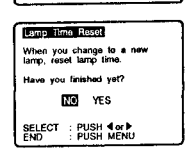
10 **Press ∧ or ∨** to select "SET UP PROJECTOR", **and then press < or >** to display the screen.



11 **Press ∧ or ∨** to select "SET UP FUNCTION", **and then press < or >** to display the screen.

12 **Press ∧ or ∨** to select "LAMP TIME RESET", **and then press < or >** to display the screen.

13 **Press < to >** select "YES". "Push POWER Button to reset" will appear.



14 **Press POWER** to reset the lamp time to "0".

SERVICE CAUTIONS AND NOTES

SERVICE POSITION

The position shown in Fig. S2 is used for checking, adjusting and replacing parts.
Extension Cable (LSUA0010) is necessary for servicing.

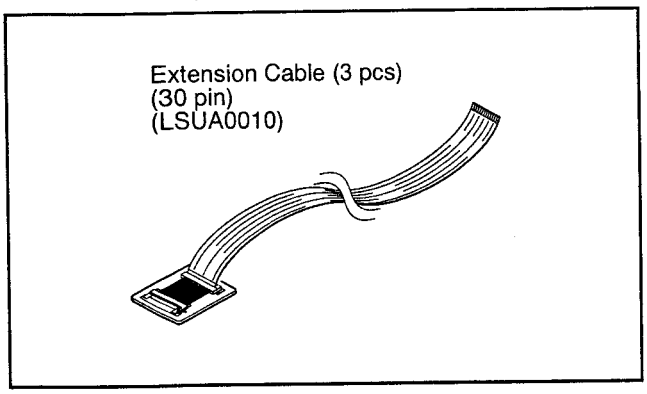


Fig. S1

1) In the order described in the "1. Disassembly of Cabinet Parts" of Disassembly Procedures, remove the Top Cover Ass'y.
2) Remove 7 screws (F) and 2 screws (G) as shown in Fig. D7, page3-7.
3) Disconnect connectors P3501, P3502, P3503, P4001 and P6002 on the Main C.B.A.
4) Connect Extension Cables as follows:
   a) Connect Extension Cable -1 (30 pin) between P3503 on the Main C.B.A. and LCD Red Unit.
   b) Connect Extension Cable -1 (30 pin) between P3502 on the Main C.B.A. and LCD Green Unit.
   c) Connect Extension Cable -1 (30 pin) between P3501 on the Main C.B.A. and LCD Blue Unit.
5) Carefully place the Main C.B.A. as shown in Fig. S2.
   Note:
   The LCD Projector power cannot be turned on unless the Air Filter unit is correctly installed.
6) After servicing, remove Extension Cables.
7) Reinstall the Main C.B.A., and reconnect connectors.
8) Make sure that all wires and leads are placed in their original position.

Note:
Confirm that the Air Filter Unit is correctly installed as shown in figure before servicing.
If the Air Filter is not correctly installed, LCD Projector power cannot be turned on.

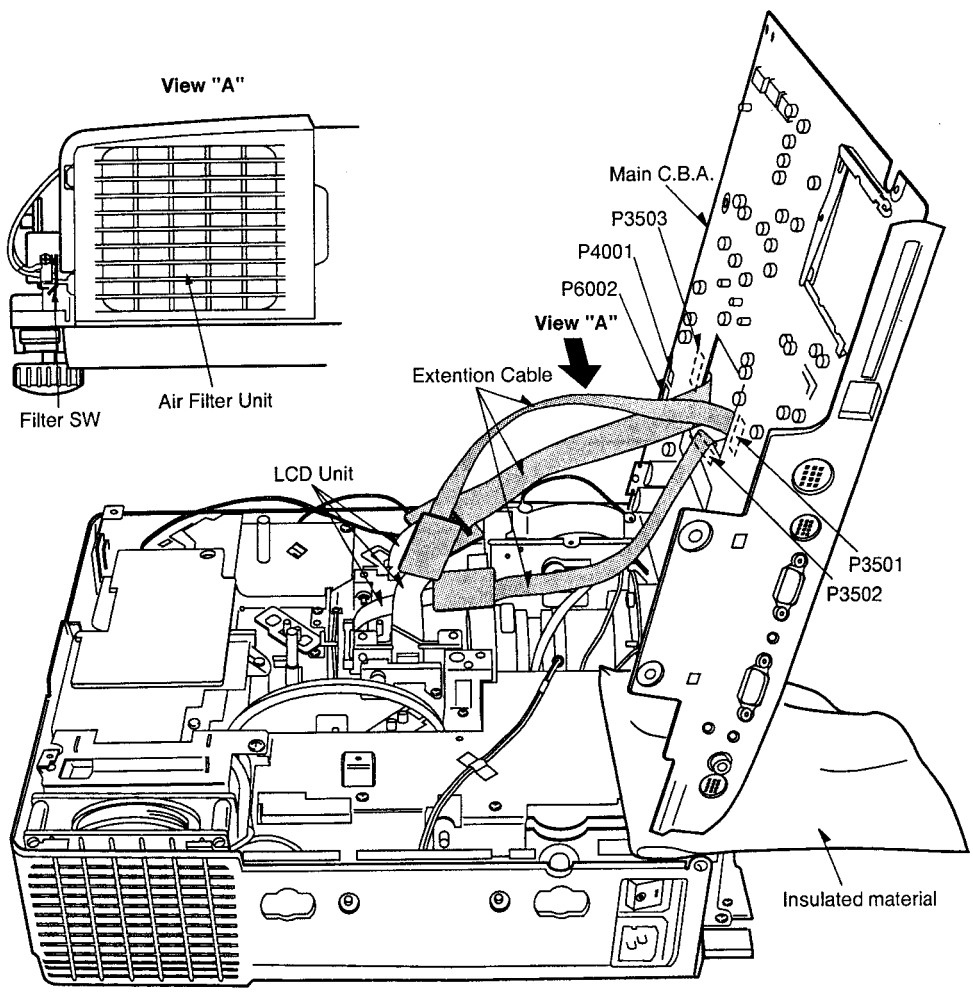


Fig. S2

How to display Lamp operation time (Service Mode)

1) Connect a jumper wire between TP6008 and TP6011 on Main C.B.A. for over 5 seconds as shown in Fig. S3.

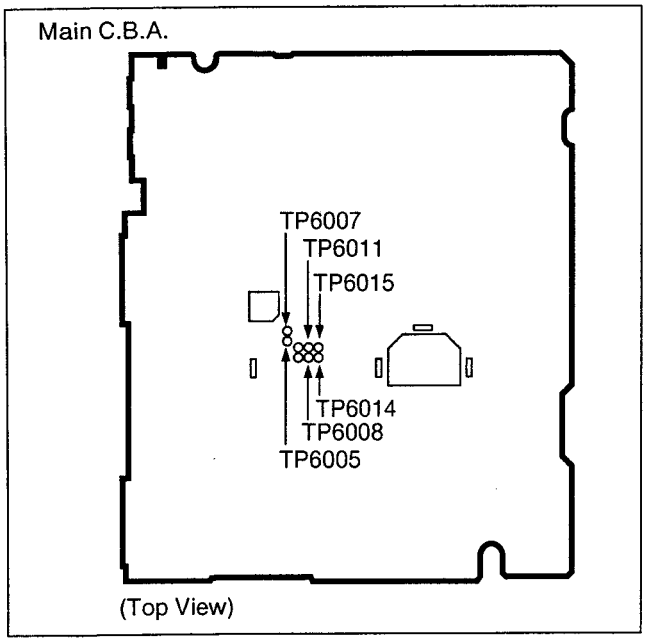


Fig. S3

2) Lamp operation time will be displayed as shown in Fig. S4.

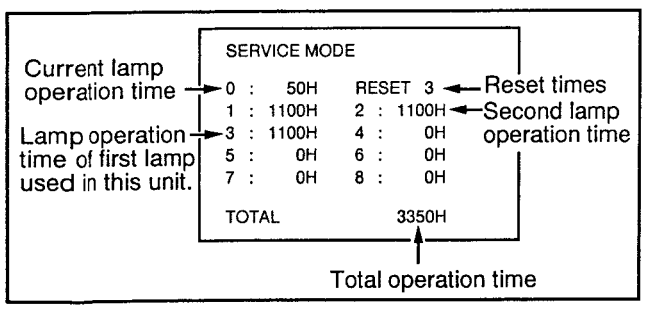


Fig. S4

3) Connect a jumper wire between TP6008 and TP6011 for over 5 seconds again or press **MENU** button on remote control in order to release from service mode.

Note:
After replacing Main C.B.A., memory data such as history of lamp operation time has been reset. However, it can be remained by installing EEPROM IC (IC6004) to replaced Main C.B.A. from original Main C.B.A.

How to initialize EEPROM IC

■If both EEPROM IC's (IC6004, IC6005) on Main C.B.A. are replaced:

After replacing both EEPROM IC's (IC6004, IC6005), be sure to perform each of following steps in the order presented.

1. Connect a jumper wire between TP6005 and TP6007 on Main C.B.A. for over 5 seconds to set to factory set mode. Then, remove the jumper wire.
2. "FACTORY" appears on screen.
3. Connect a jumper wire between TP6005 and TP6007 again for over 5 seconds to initialize EEPROM IC's. Then, remove the jumper wire.
4. "SELF CHECK" appears on screen.
5. Remove jumper wires and "MEMORY OK" appears on screen.
6. Perform adjustments 1 through 4 and 11 through 19 on Page 3-20~3-32.
7. After completing all adjustments, press the **MENU** button to memorize adjustment data in EEPROM IC and release from FACTORY ADJUST mode.
   Otherwise, adjustment data will be cancelled.
8. "FACTORY" appears on screen.
9. Press the POWER button on remote control in order to release from factory set mode.

Note:
When initializing EEPROM IC's, memory data such as history of lamp operation time and adjustment data will be reset.

Lamp replacement procedure

Caution: Because of possibility of injury, strictly follow the replacement procedure below.

Tools required: A coin.

1. **After the cooling fan has stopped, and STANDBY(R) ON(G) indicator turns solid red. Set the Main Power Switch to OFF and unplug the power cord.**
   Note: Please wait more than one hour for lamp replacement.

   [If you need to replace the lamp more urgently]
   • The LCD Projector has a forced cooling feature. After the POWER switch is turned OFF, and sometime during about the first minute of the normal cooling fan operation, press < and > at same time. The cooling fan will change to high speed for about 10 minutes. (The "C-d" STATUS CODE will be displayed.)

2. **Grabbing the handle, place the LCD Projector up on its side as illustrated.**

3. **Remove the Lamp cover screws.**
   First read caution and warning labels on Lamp cover. Then, remove the Lamp cover screws (2) by using coin, and take off the lamp cover.

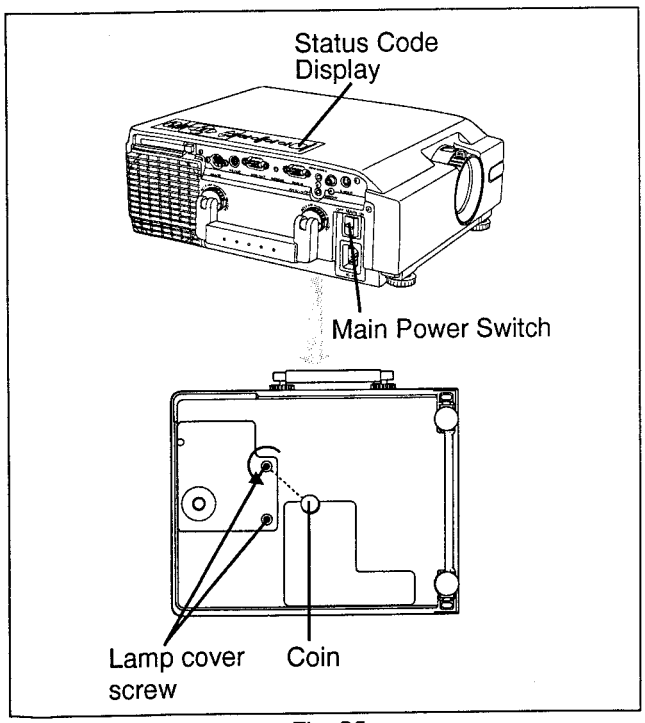


Fig. S5

4. **Remove the Lamp unit screw.**
   Remove the lamp unit screw (2), then grasp the Lamp unit handle and carefully pull it from the LCD Projector. Keep Lamp housing opening to your right. Do not touch Lamp or point Lamp opening at anyone.

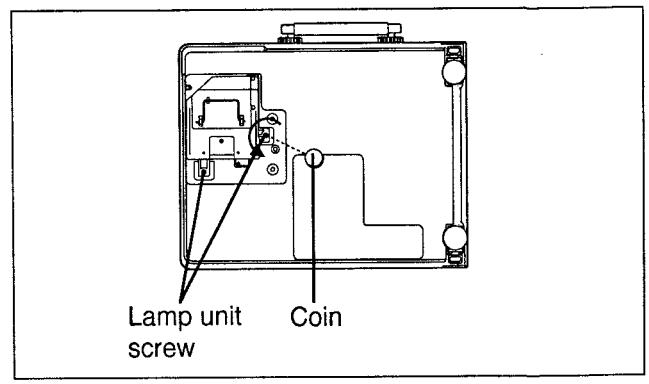


Fig. S6

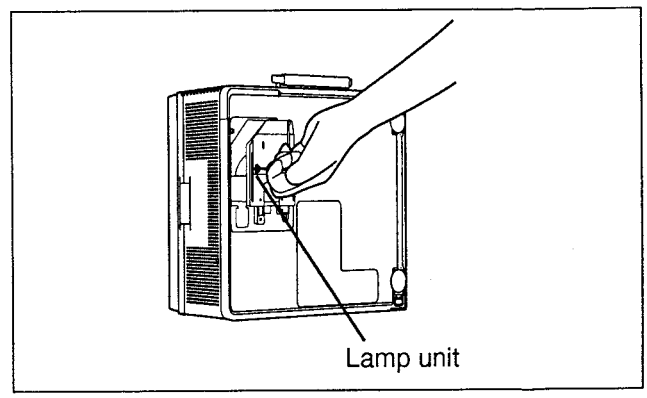


Fig. S7

WARNING: The lamp may be hot. Be careful when handling.

CAUTION: • High-pressure lamp may be explode if improperly handled.
• Danger of injury due to lamp fragments.

Cleaning the Projection Lens

Use lens cleaning paper and cleaner available at your local camera shop, etc.
Dampen the cleaning paper with cleaner and gently wipe the lens surface from the centre outward to remove dust as shown in Fig. S8.

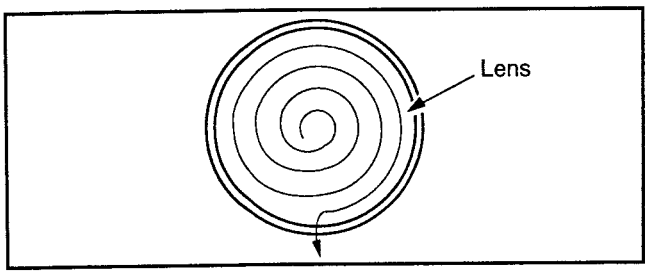


Fig. S8

Note:
Do not use excessive force when cleaning the lens.

Connection of the Flexible Cables to Trap Connectors

Plug No.	No. of Pins	C.B.A.
P3501	30 pin	Main C.B.A.
P3502	30 pin	Main C.B.A.
P3503	30 pin	Main C.B.A.
P6005	18 pin	Main C.B.A.

(Removal and Installation of Flexible Cable)

a. Removal
1. On the Trap Connector, swing both ends of the Locking Tab to release the Trap portion of the Connector. Then pull Flexible Cable out to remove as shown in Fig. S9.

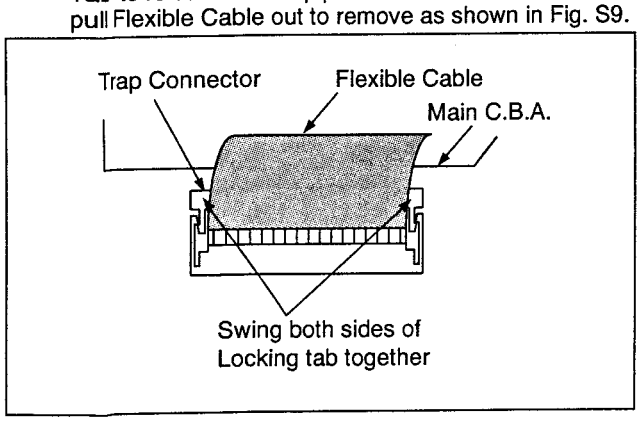


Fig. S9

b. Installation
1. Insert the end of the Flexible Cable into the Trap Connector.
2. Without twisting the Cable, press the Locking Tab in into its locked positions.
3. Gently and slightly pull up on the Cable to confirm if it is installed firmly.

Wire and Lead Position Diagram

After servicing, make sure that all wires and leads are placed in their original position.
It is important for the best operation of the unit.

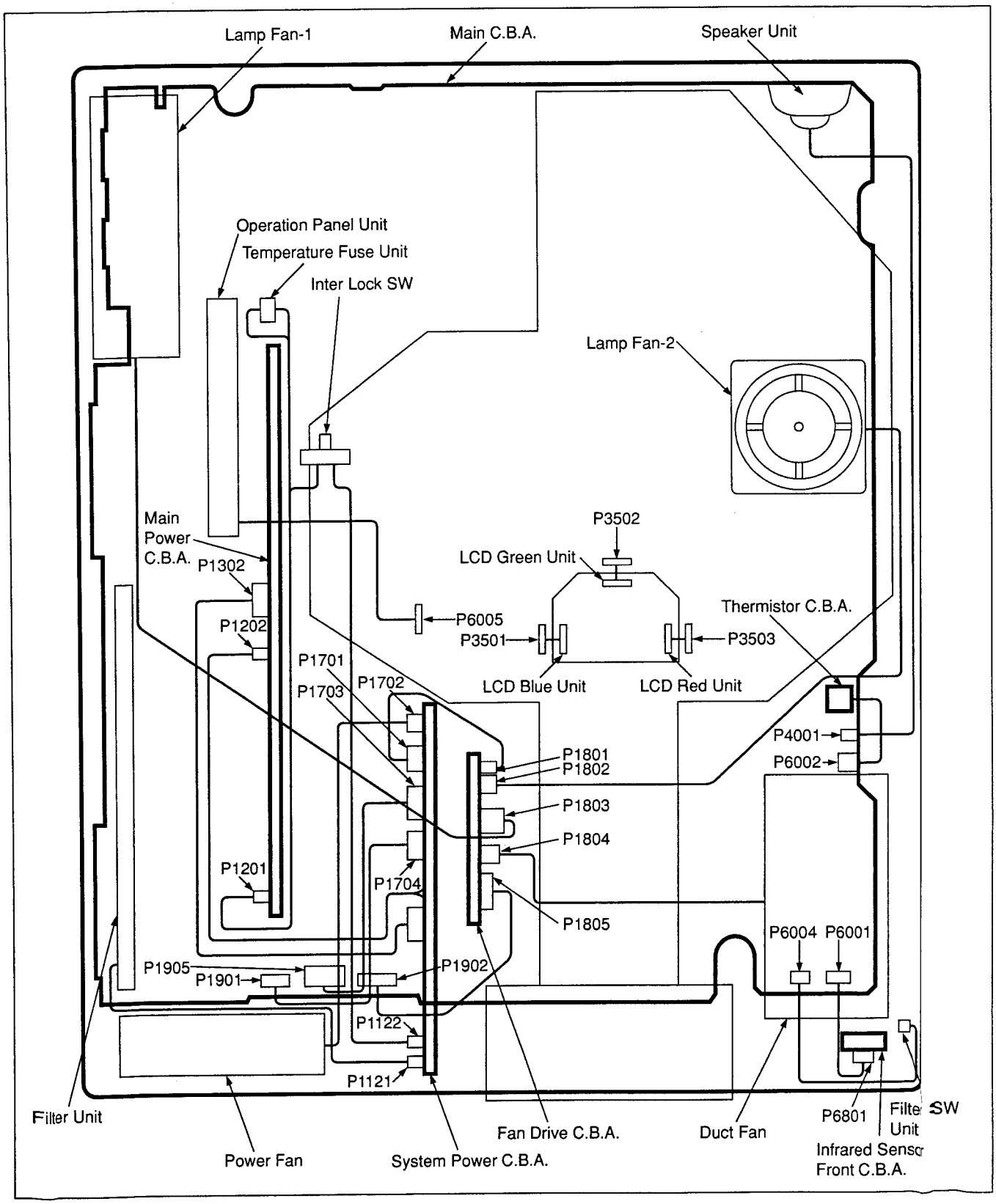


Fig. S10

DISASSEMBLY/ASSEMBLY PROCEDURES

1. DISASSEMBLY OF CABINET PARTS

1-1. DISASSEMBLY FLOWCHART

This flowchart indicates the disassembly steps of the cabinet parts and the P.C. Boards. When reassembling, perform the step(s) in the reverse order.

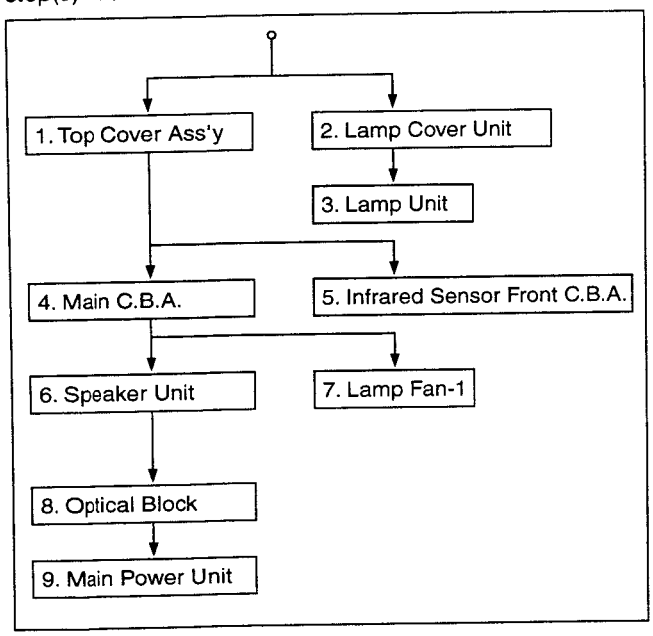


Fig. D1

1-2. DISASSEMBLY METHOD

1. Removal of the Top Cover Ass'y

1. Remove 4 screws (A) as shown in Fig. D2.

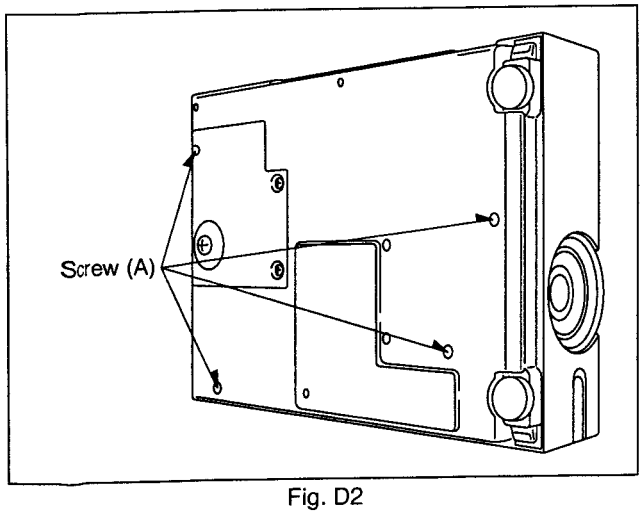


Fig. D2

2. Remove 4 screws (B) as shown in Fig. D3.
3. Hold the indent on the Air Filter Unit and pull the Air Filter Unit out of the LCD projector.
4. Remove a screw (C).

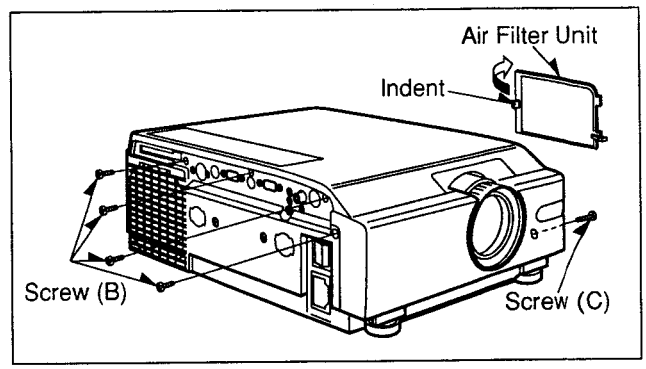


Fig. D3

5. Lift up the Top Cover Ass'y carefully rotating in the direction of arrows shown in Fig. D4 and disconnect a connector P6005.
   Caution: Be careful when lifting up the Top Cover Ass'y. A connector P6005 may be damaged if you pull it strongly.
6. Carefully pull out the Top Cover Ass'y paying attention to 3 tabs.

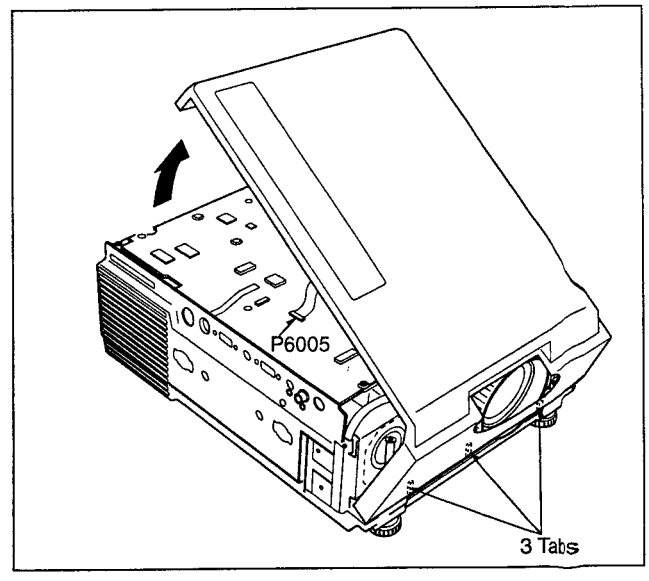


Fig. D4

2. Removal of the Lamp Cover Unit

1. Loosen 2 screws (D) as shown in Fig. D5.

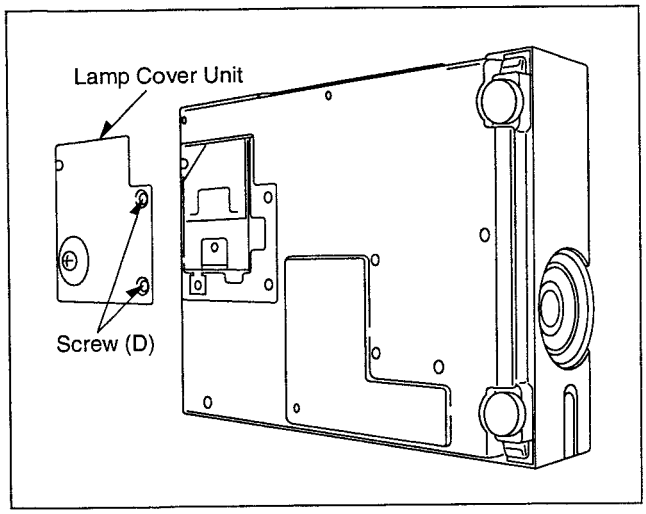


Fig. D5

3. Removal of the Lamp Unit

1. Loosen 2 screws (E) as shown in Fig. D6.
2. Hold the handle of the Lamp Unit and carefully pull it out.
   Caution: Do not touch the Lamp House, Lamp Unit, etc. until they have completely cooled off.

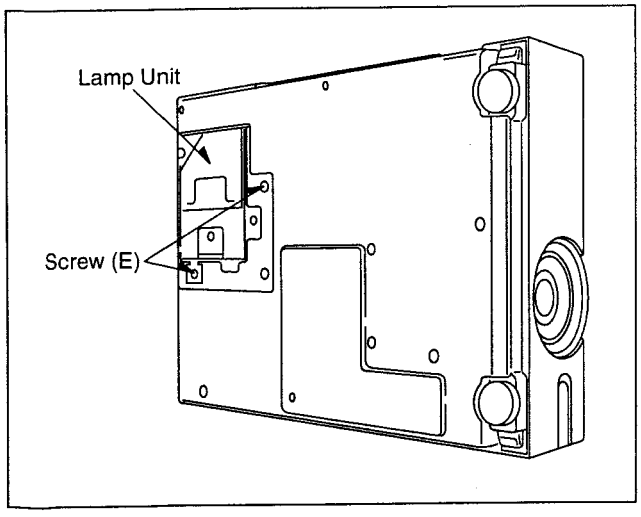


Fig. D6

4. Removal of the Main C.B.A

1. Remove 7 screws (F) as shown in Fig. D7.
2. Remove 2 screws (G).
3. Disconnect 10 connectors P1901, P1902, P1905, P4001, P6001, P6002, P6004, P3501, P3502, P3503 on the Main C.B.A.

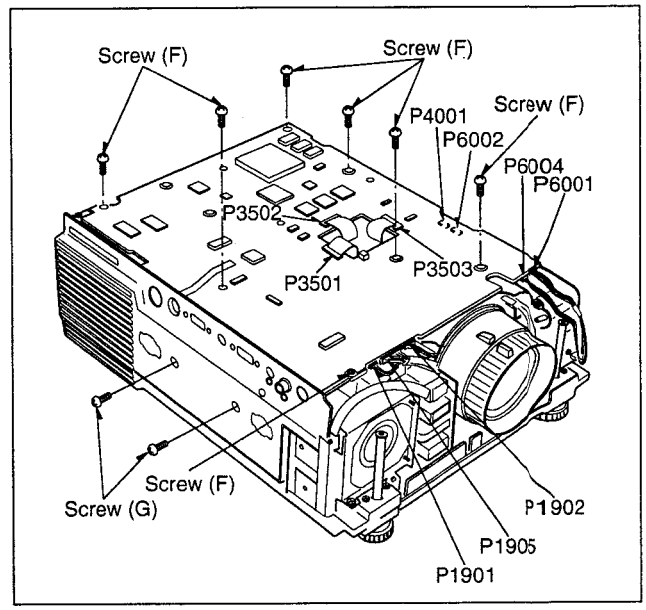


Fig. D7

5. Removal of the Infrared Sensor Front C.B.A

1. Remove a screw (H) as shown in Fig. D8.

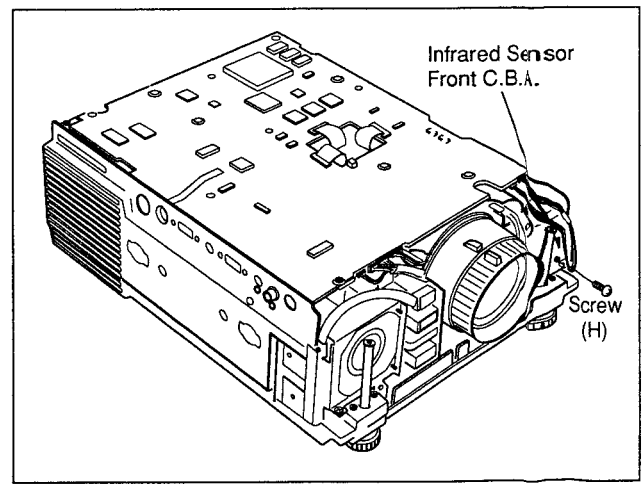


Fig. D8

6. Removal of the Speaker Unit

1. Remove 2 screws (I) as shown in Fig. D9.

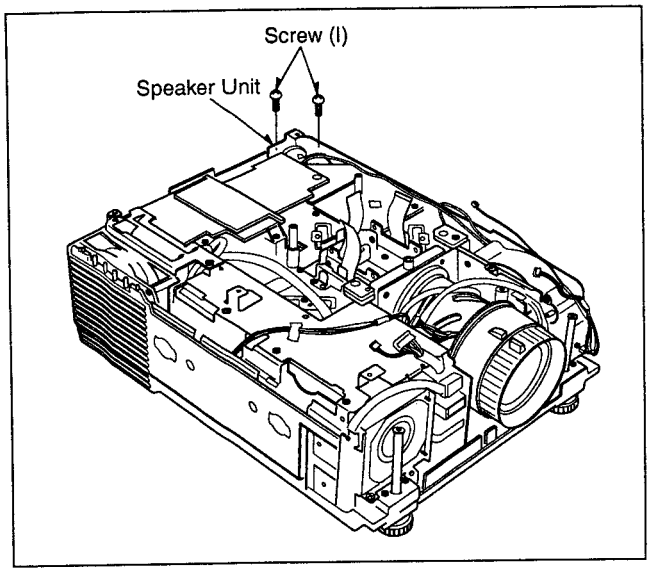


Fig. D9

7. Removal of the Lamp Fan-1

1. Remove 2 screws (J) and a screw (K) as shown in Fig. D10.

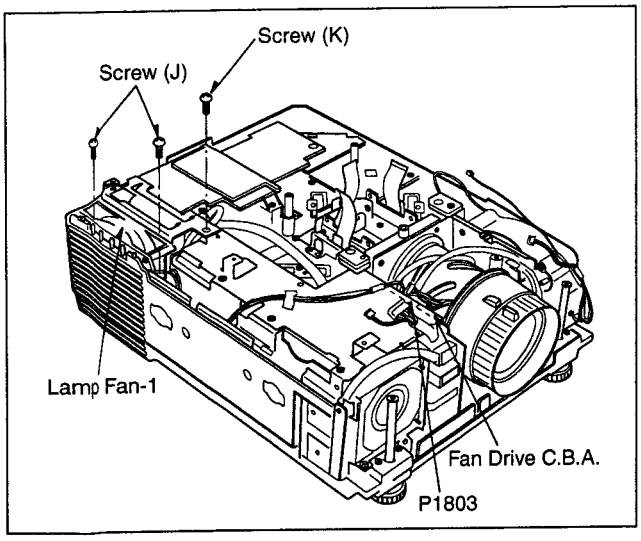


Fig. D10

2. Disconnect a connector P1803 on the Fan Drive C.B.A. as shown in Fig. D11.

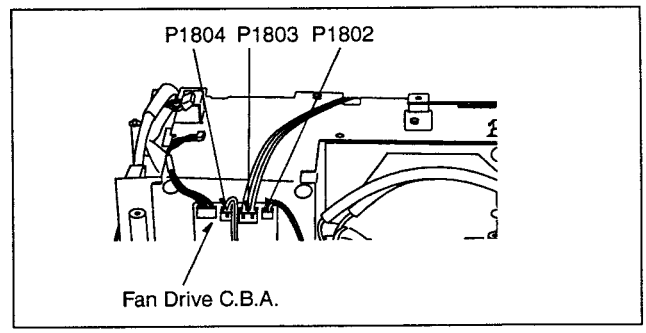


Fig. D11

8. Removal of the Optical Block

1. Remove a screw (L) as shown in Fig. D12 and remove the Lamp Air Duct.

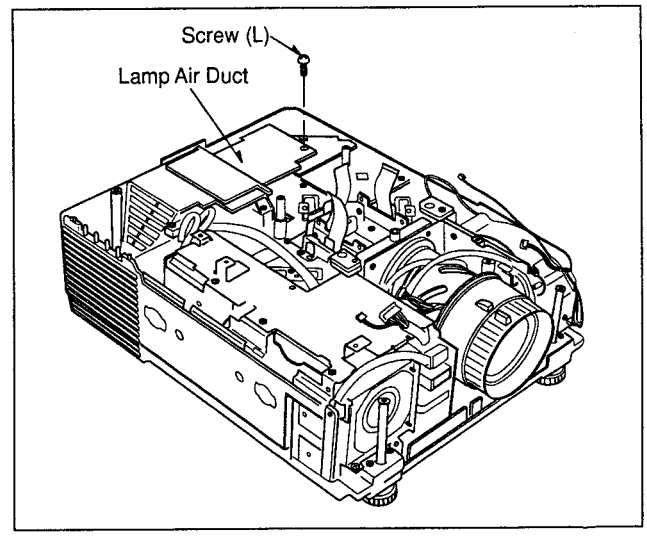


Fig. D12

2. Remove a screw (M) and 2 screws (N) as shown in Fig. D13 and remove the Connector stay and the Lamp House.

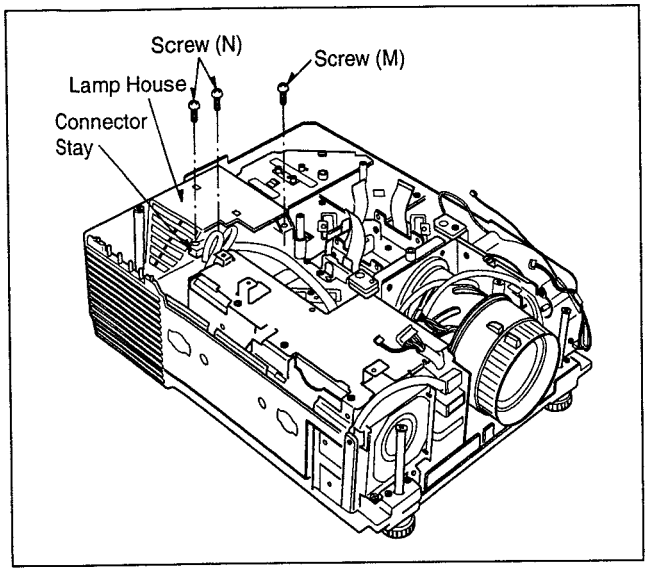


Fig. D13

3. Remove 4 screws (O) as shown in Fig. D14.

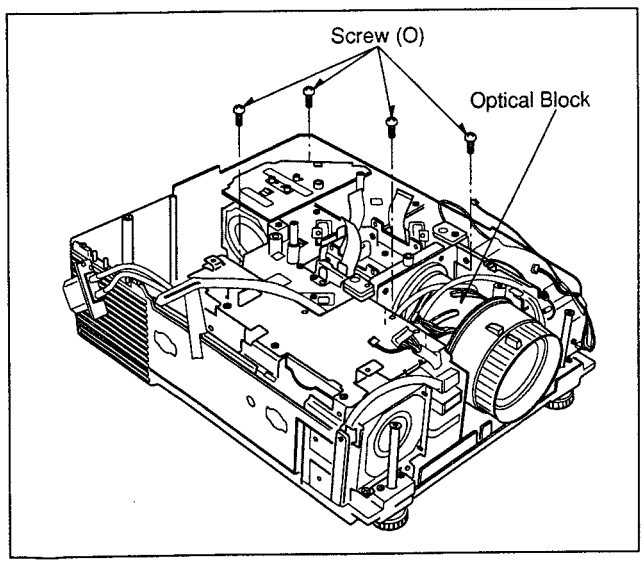


Fig. D14

4. Disconnect 2 connectors P1802 and P1804 on the Fan Drive C.B.A and carefully pull out the Optical Block as shown in Fig. D11, Page3-8.

9. Removal of the Main Power Unit

1. Remove 5 screws (P) as shown in Fig. D15.

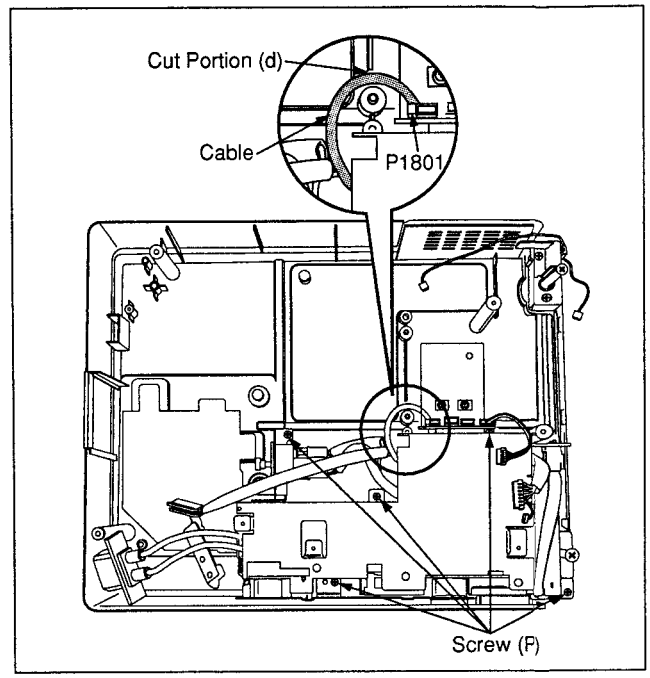


Fig. D15

2. Pulling the Portion (a) of the Bottom Case Unit, press the Portion (b) on the AC Inlet, as shown in Fig.D16, and release the Main Power Unit rotating in the direction of arrow and pull it upward.
   Note:
   Be careful when rotating the Main Power Unit so as not to damage the Portion (c).

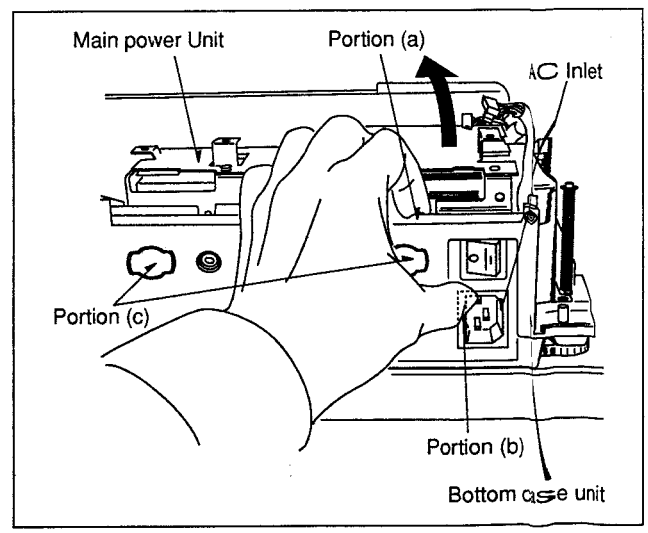


Fig. D16

Assembly Notes:

1. Insert the cable connected to a connector P1801 in the cut portion (d) of chassis as shown in Fig. D15.

2. DISASSEMBLY OF OPTICAL UNIT

2-1. DISASSEMBLY FLOWCHART

This flowchart indicates the disassembly steps of the main parts of Optical Unit. When reassembling, perform the step(s) in the reverse order.

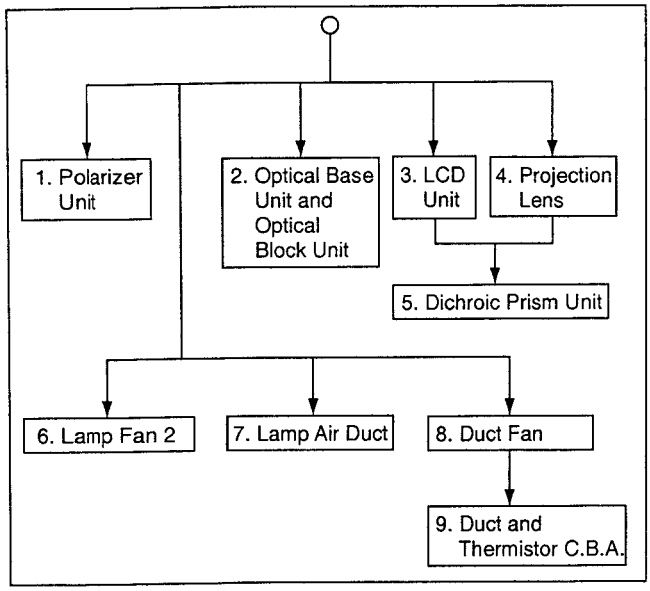


Fig. O1

2-2. DISASSEMBLY METHOD

1. Removal of the Polarizer Units

1. Remove 6 screws (A) to remove the Polarizer Red Unit, the Polarizer Green unit and the Polarizer Blue Unit as shown in Fig. O2.

Note:

1. Use extreme care not to damage the Polarizer Units, when servicing.
2. Make sure that no dust gets on the Polarizer Units. Clean the Polarizer Units with cleaning paper moistened with lens cleaner if necessary.

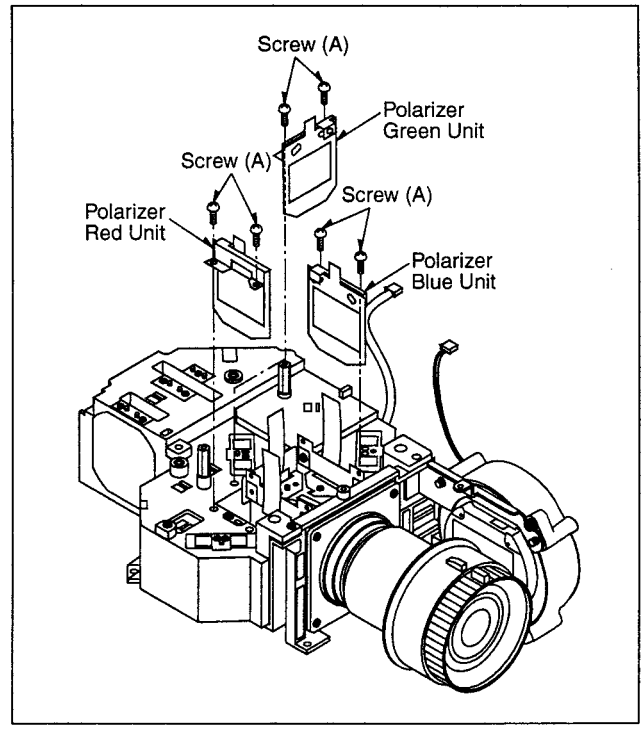


Fig. O2

Assembly Note:

1. After replacing the Polarizer Unit, adjustment is necessary (Refer to "1. Initial Guide Line", Page 3-18).
2. Make sure of the Mark colour to distinguish the Polarizer Unit (Red, Green, Blue) as shown in Fig. O3.

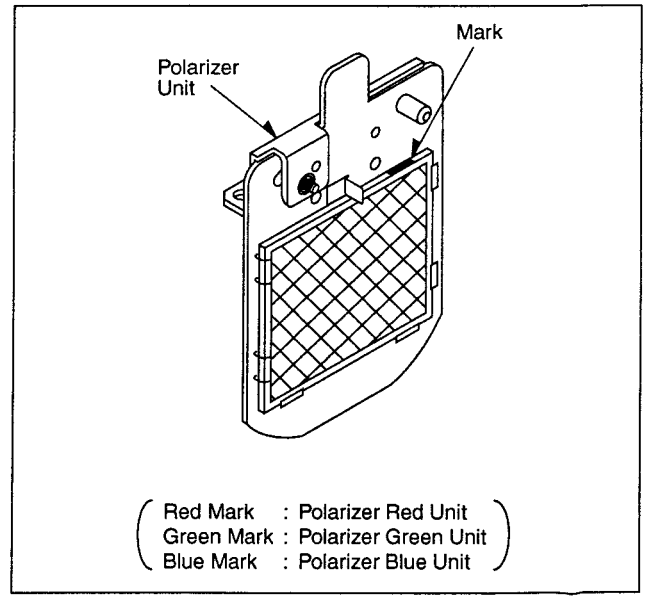


Fig. O3

2. Removal of the Optical Base Unit and Optical Block Unit

1. Remove 4 screws (B) as shown in Fig. O4.
2. Lift the Optical Base Unit up to release 4 projections.

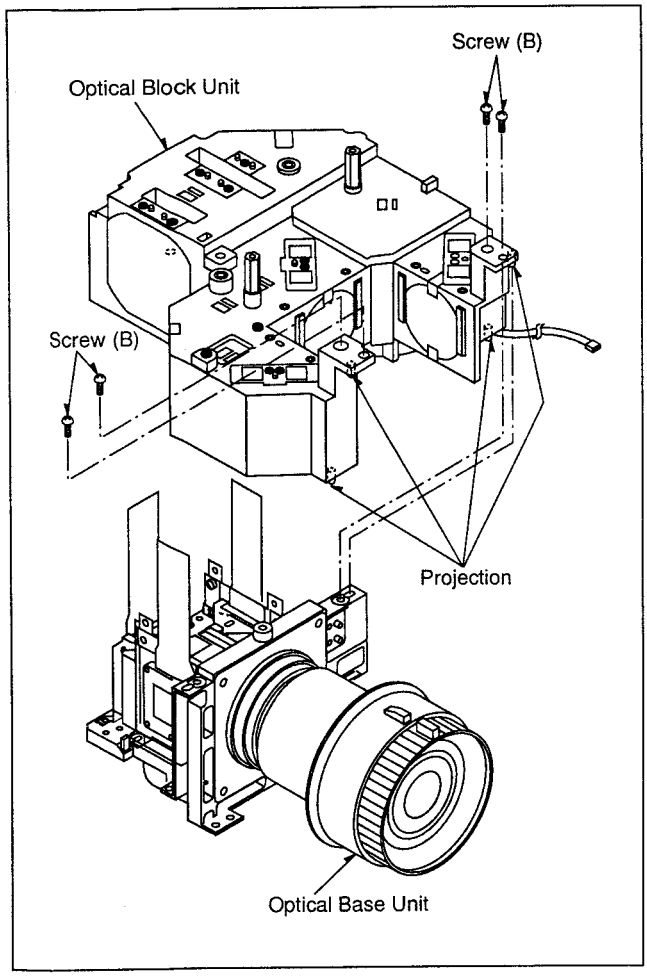


Fig. O4

3. Removal of the LCD Unit (RED/GREEN/BLUE)

Removal of the LCD Green Unit

1. Remove 2 screws (C) and 2 washers (C) to remove the LCD Green Unit as shown in Fig. O5.

Removal of the LCD Red Unit

1. Remove 3 screws (D) and 3 washers (D) to remove the LCD Red Unit as shown in Fig. O5.

Removal of the LCD Blue Unit

1. Remove 3 screws (E) and 3 washers (E) to remove the LCD Blue Unit as shown in Fig. O5.

Note:

1. After replacing the LCD Unit, adjustment is necessary (Refer to "1. Initial Guide Line", Page 3-18).
2. Make sure that no dust gets on the surface of the LCD. Clean the surface of the LCD with a cotton swap moistened with ethyl alcohol if necessary.
3. When removal of the LCD Unit, refer to following procedures.
   1) Remove the TOP Cover Unit (Refer to "Removal of the Top Cover Unit", Page 3-6).
   2) Remove the Main C.B.A. (Refer to "Removal of the Main C.B.A.", Page 3-7).

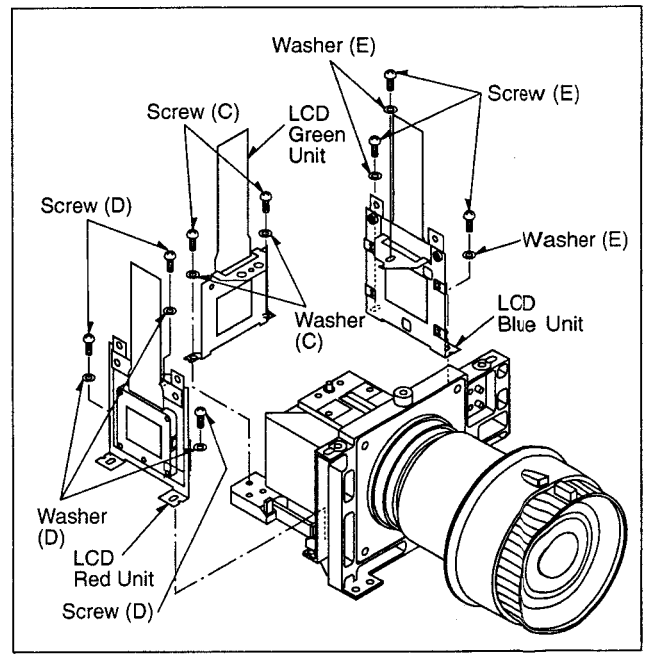


Fig. O5

Important Notes:

There are 2 types of LCD Panel for each LCD Unit. (LCD Green, Red and Blue)
Be sure to confirm the colour of the printed character on the flexible cable of the LCD Unit to decide which part number to order (refer to Fig. O6, Page 3-12).
(Please refer to the following table after checking the printed character colour.)
If difference types of the LCD Panel are used, a non-uniformity colour will appear on the screen.

LCD Unit	Part No.	Colour of characters printed	
		Black	Red
LCD Green Unit	LSXA0256	O	
	LSXA0253		O
LCD Red Unit	LSXA0255	O	
	LSXA0252		O
LCD Blue Unit	LSXA0257	O	
	LSXA0254		O

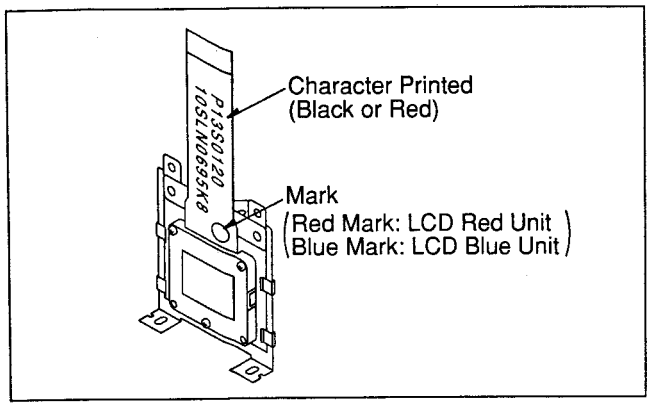


Fig. O6

4. Removal of the Projection Lens

1. Remove 4 screws (F) to remove the Projection Lens as shown in Fig. O7.

Note:

1. Make sure that no dust gets on the Projection Lens. Clean the Projection Lens with cleaning paper moistened with lens cleaner if necessary.
   (Refer to "Cleaning the Projection Lens", Page 3-4.)

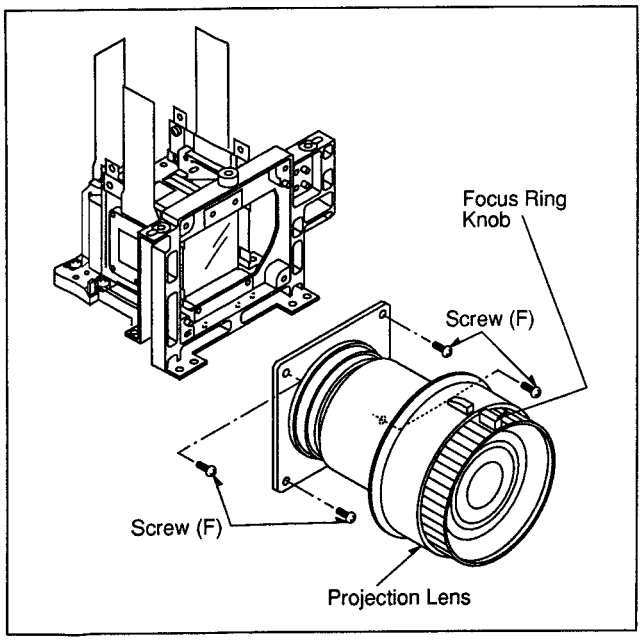


Fig. O7

Assembly Note:

1. When assembling the Projection Lens, attach the Focus Ring Knob so that it faces upward.

5. Removal of the Dichroic Prism Unit

1. Remove 6 screws (G) to remove the Dichroic Prism Unit as shown in Fig. O8.

Note:

1. Make sure that no dust gets on the Dichroic Prism Unit. Clean the Dichroic Prism Unit with cleaning paper moistened with lens cleaner if necessary.

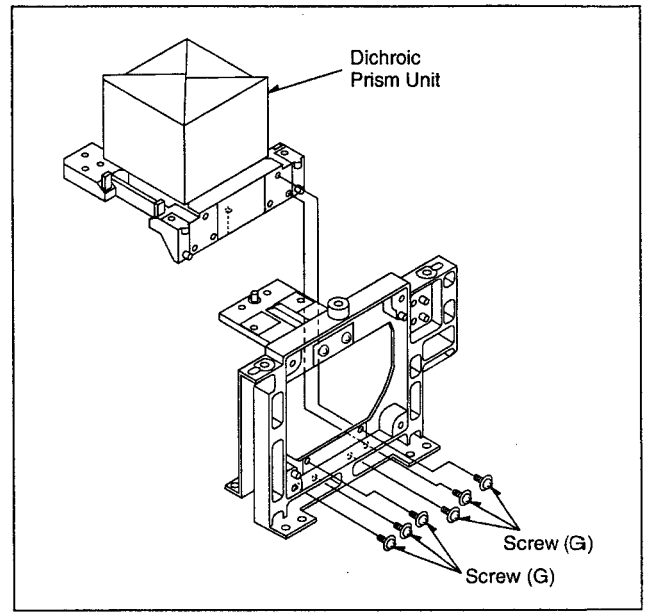


Fig. O8

6. Removal of the Lamp Fan-2

1. Remove 2 screws (H) to remove the Lamp Fan-2 as shown in Fig. O9.

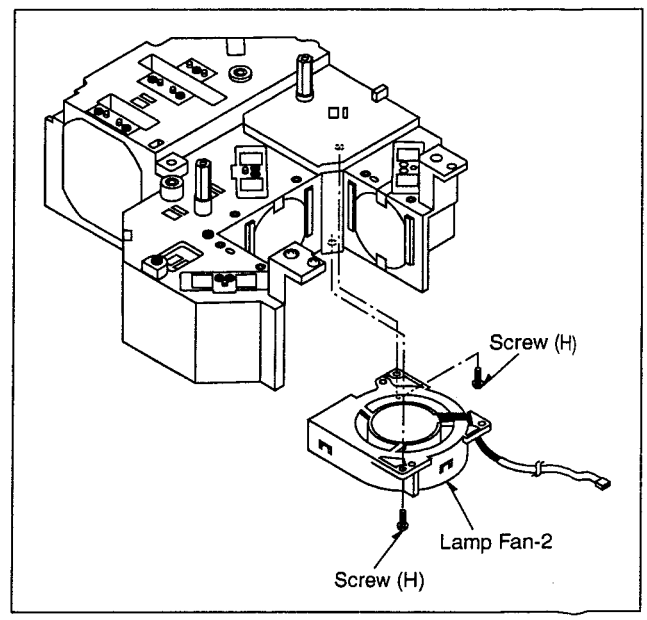


Fig. O9

7. Removal of the Lamp Air Duct

1. Remove 3 screws (I) to remove the Lamp Air Duct as shown in Fig. O10.

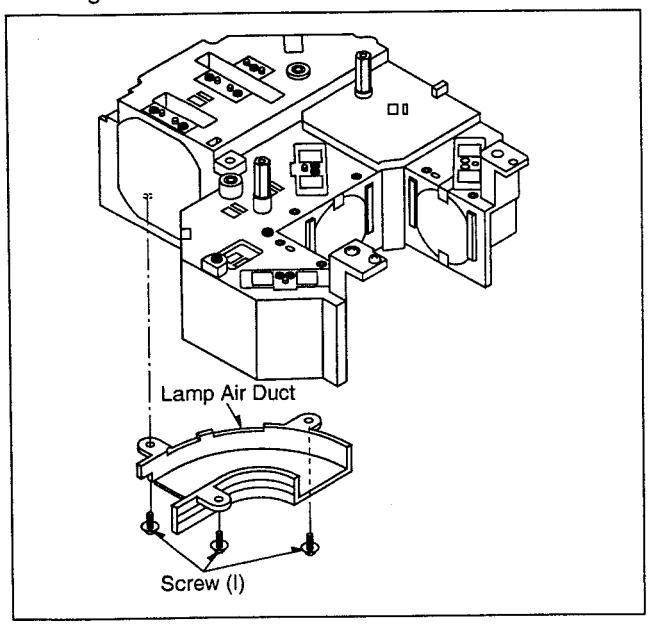


Fig. O10

8. Removal of the Duct Fan

1. Remove 2 screws (J) to remove the Duct Fan along with the Fan Plate as shown in Fig. O11.
2. Remove 2 screws (K) to remove the Duct Fan from the Fan Plate.

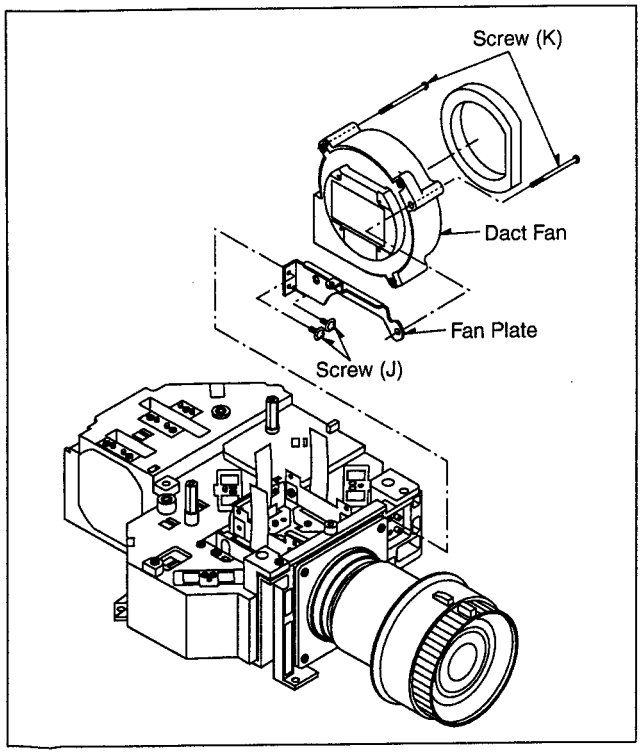


Fig. O11

9. Removal of the Duct and Thermistor C.B.A.

1. Remove 3 screws (L) to remove the Duct along with the Thermistor C.B.A as shown in Fig. O12.
2. Remove 3 screws (M) to remove the Duct Cover.
3. Then remove a screw (N) to remove the thermistor C.B.A.

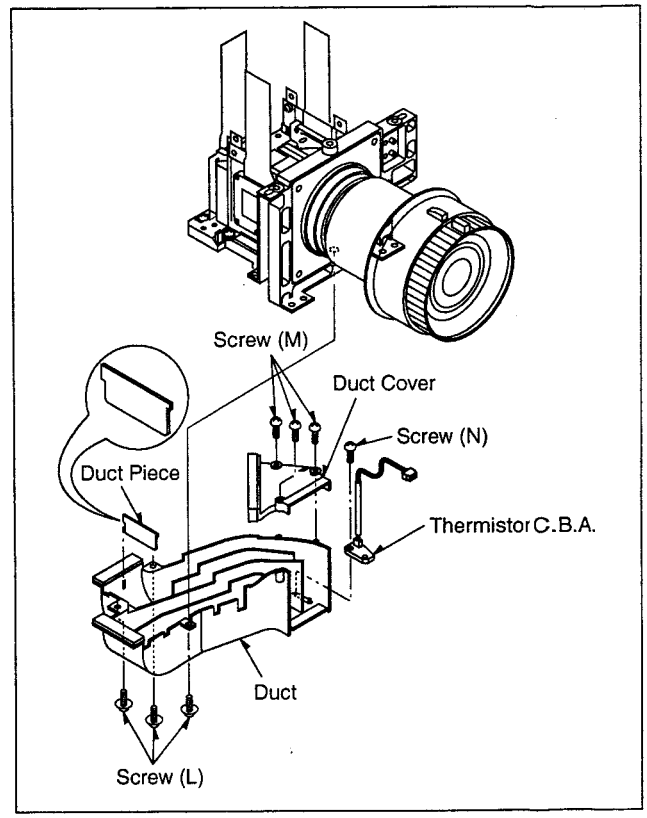


Fig. O12

Assembly Notes:

1. Confirm the direction of the Duct Piece when installing it.
2. Insert the lead wire of Thermistor C.B.A. in the cut portion (a) of the Duct Cover as shown in the Fig. O13.

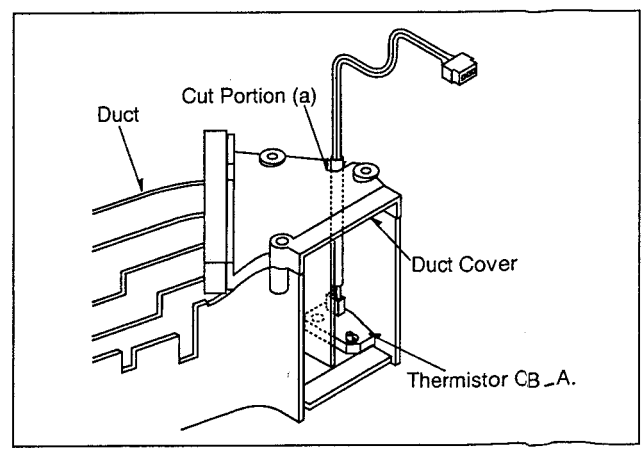


Fig. O13

3. DISASSEMBLY OF MAIN POWER UNIT

3-1. DISASSEMBLY FLOWCHART

This flowchart indicate the disassembly steps of the main parts of the main power unit. When reassembling, perform the step(s) in the reverse order.

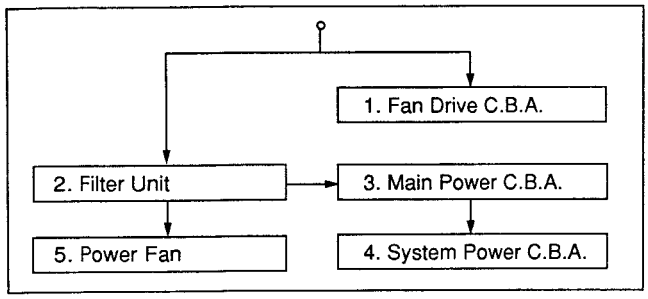


Fig. P1

3-2. DISASSEMBLY METHOD

1. Removal of the Fan Drive C.B.A.

1. Disconnect connector P1801 as shown in Fig.P2.
2. Release 3 Locking Portions to remove the Fan Drive C.B.A..

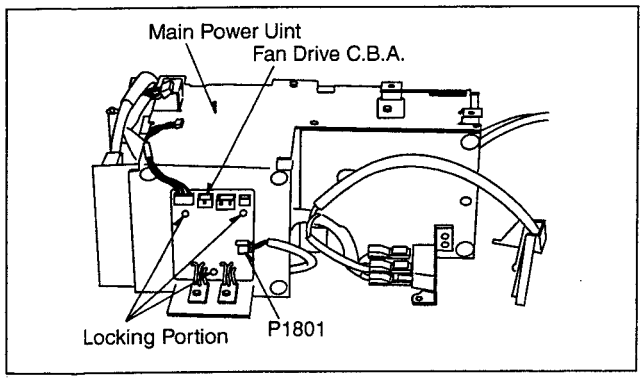


Fig. P2

2. Removal of the Filter Unit

1. Remove 2 screws (A) and remove the Handle Plate Unit as shown in Fig. P3.
2. Remove 5 screws (B) and disconnect connector P1121.

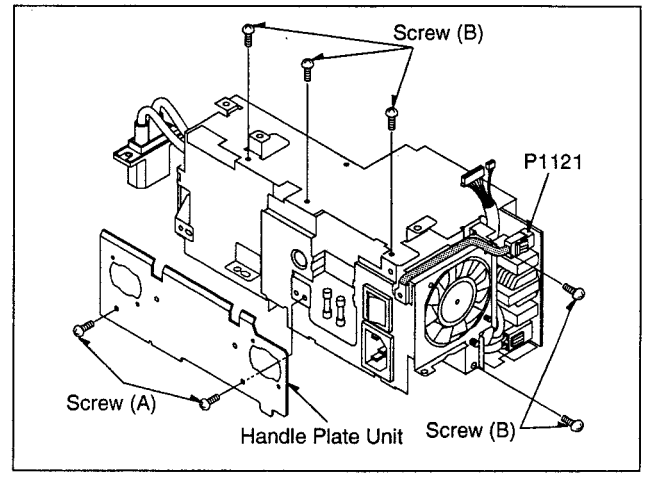


Fig. P3

3. Disconnect connector P1702 to remove the Filter Unit as shown in Fig.P4.

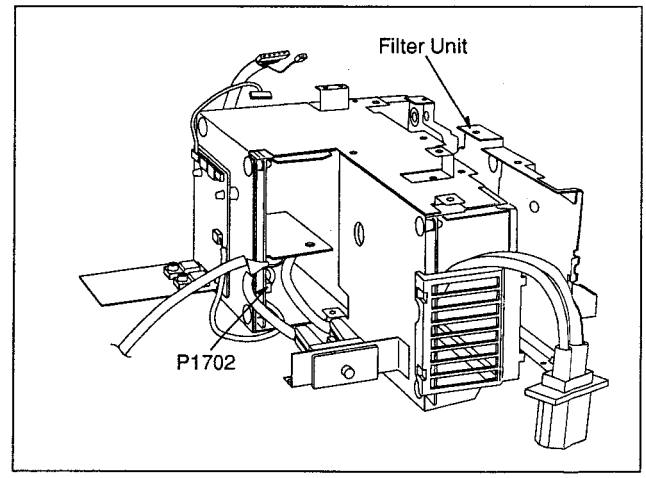


Fig. P4

Assembly Note:

Insert the Power Fan Cable as shown in Fig. P5, Page 3-15, and connect a connector P1702.

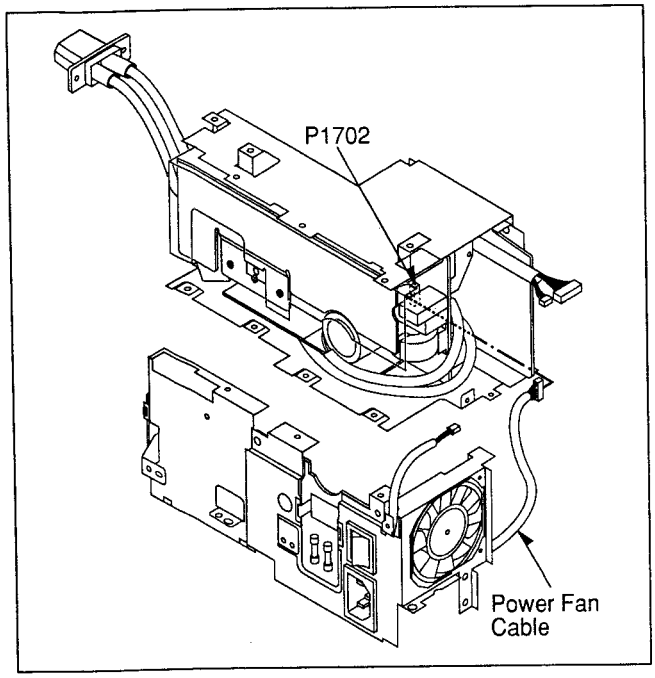


Fig. P5

3. Removal of the Main Power C.B.A.

1. Disconnect connectors P1201, P1202, P1302 as shown in Fig. P6.

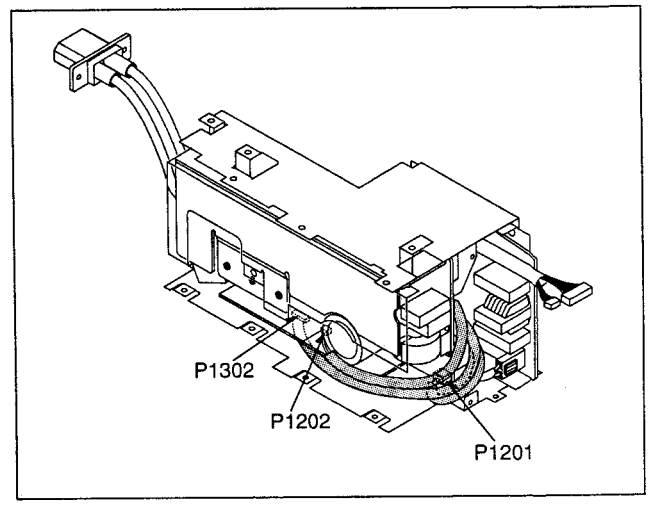


Fig. P6

2. Remove a screw (C) to remove the Ballast Barrier-A3 as shown in Fig. P7.
3. Remove a screw (D) to remove the Ballast Barrier-A4.
4. After remove a screw (E), release 3 Locking Tabs to remove the Main Power C.B.A. as shown in Fig. P7.

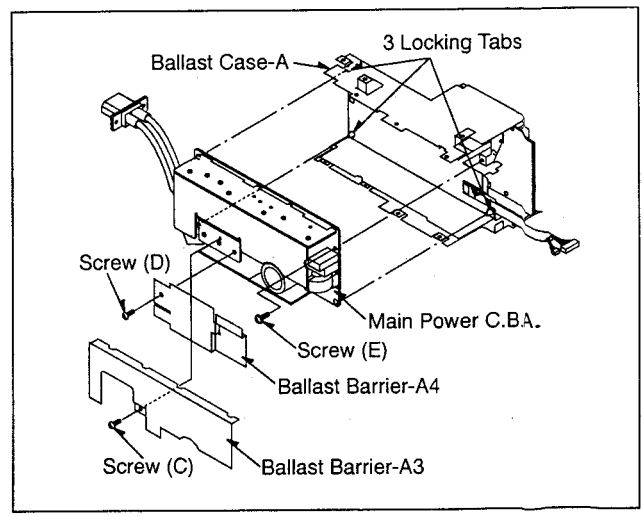


Fig. P7

Assembly Note:

Make sure that all cables and leads are placed in their original position as shown in Fig. P6.

4. Removal of the System Power C.B.A.

1. Remove the Ballast Barrier-A1.
   After remove a screw (F), unlock 3 Locking Tabs to remove the System Power C.B.A. as shown in Fig. P8.

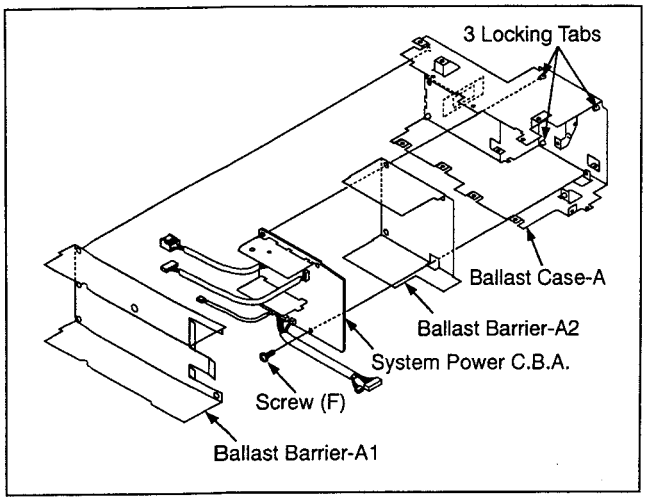


Fig. P8

2. Disconnect the cable (4 pins) from the terminal of Inter Lock SW as shown in Fig.P9.

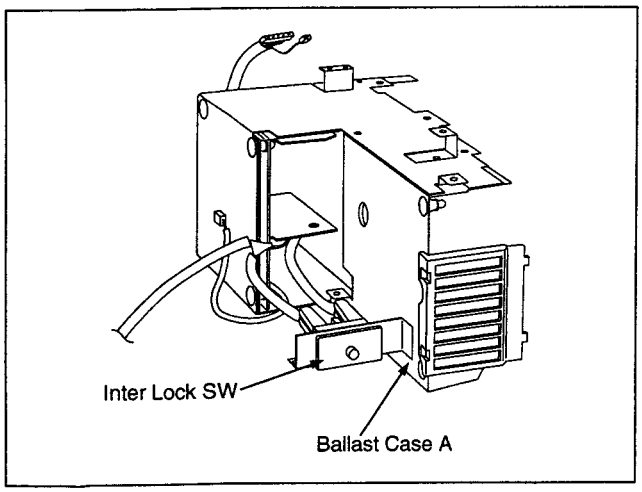


Fig. P9

Assembly Note:

1. Insert the cable (4 pins) correctly to the terminal of Inter Lock SW as shown in Fig. P10.

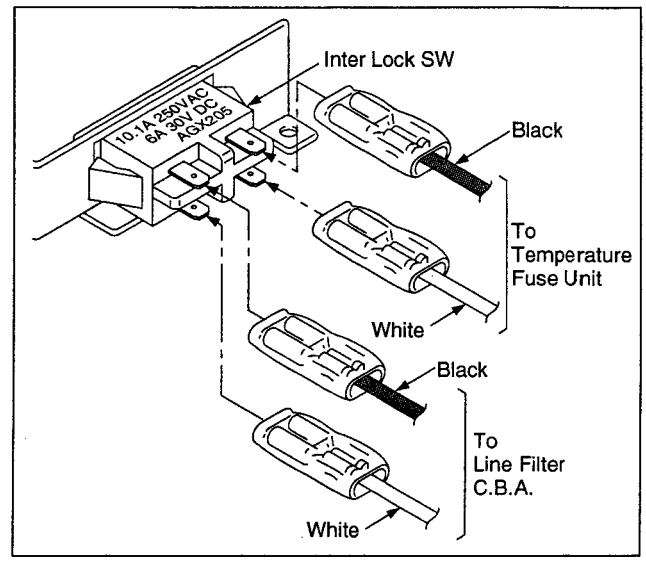


Fig. P10

2. Make sure that all cables and leads are placed in their original position as shown in Fig. P11.

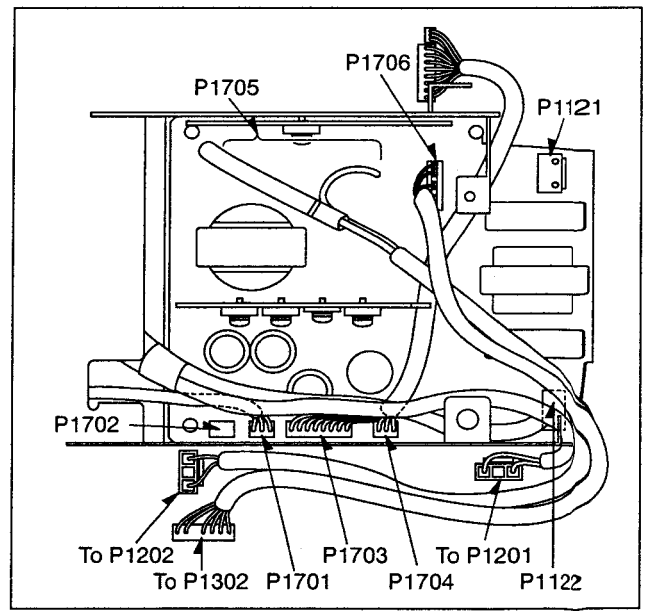


Fig. P11

5. Removal of the Power Fan

1. Remove 2 screws (G) to remove the Power Fan as shown in Fig. P12.

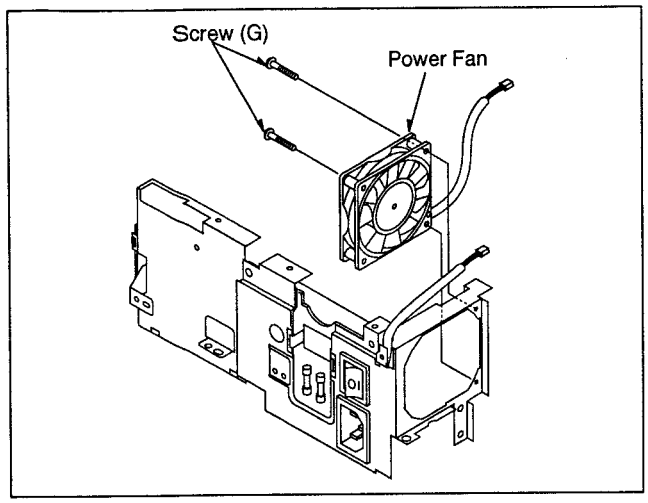


Fig. P12

ADJUSTMENT PROCEDURES

1. INITIAL GUIDE LINE

The tables below show adjustments which will be necessary according to the unit parts and optical parts to be replaced. Make sure to perform these adjustments shown below as necessary .

If you replace:	Adjustments
MAIN C.B.A.	1, 2, 3, 4,
LCD GREEN UNIT	1, 2, 3, 4, 5, 6, 7, 8
LCD RED UNIT	1, 2, 3, 4, 6, 8
LCD BLUE UNIT	1, 2, 3, 4, 7, 8
POLARIZER UNIT	9
OPTICAL BLOCK UNIT	(4), 9, (10)

List of necessary adjustments
1. LCD COMMON ADJUSTMENT
2. BLACK LEVEL ADJUSTMENT
3. WHITE LEVEL ADJUSTMENT
4. WHITE BALANCE ADJUSTMENT
5. GREEN FOCUS ADJUSTMENT
6. RED FOCUS ADJUSTMENT
7. BLUE FOCUS ADJUSTMENT
8. LCD CONVERGENCE ADJUSTMENT
9. POLARIZER ADJUSTMENT
10. FULL MIRROR ADJUSTMENT

Notes:

1. ( ) : Items which need the confirmation when replaced.
2. LCD Green Unit is fixed for reference for convergence adjustment.
   Adjust LCD Red Unit for R-G Convergence Adjustment.
   Adjust LCD Blue Unit for B-G Convergence Adjustment.

If you replace:	Necessary adjustment	
	R-G Convergence Adjustment	B-G Convergence Adjustment
LCD Green Unit	○	○
LCD Blue Unit		○
LCD Red Unit	○	

3. When any adjustments 1 through 4 are necessary, please refer to "Preparation for Adjustments 1 through 4", Page 3-19.
4. When any adjustments 11 through 19 are necessary, please refer to "Preparation for Adjustments 11 through 19", Page 3-28.
5. Use the signal of SVGA 60Hz for PC input except for PLL Adjustment. (Refer to adjustment 13)

About The "FACTORY ADJUST MODE"

All Electrical Adjustments are performed on "FACTORY ADJUST MODE" which is used remote control unit instead of variable resistor to control the adjustment value.

1. Connect a jumper wire between TP6014 and TP6015 on Main C.B.A. for over 5 seconds to enter "FACTORY ADJUST MODE".
2. Press the remote control "∧" or "∨" to select and press the "<" or ">" button to set the item to be adjusted.

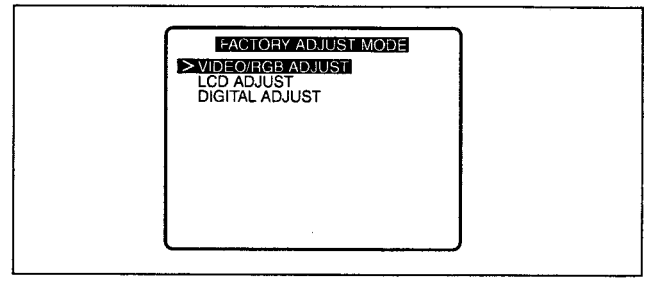


Fig. I1

Note:
Do not adjust all items in "DIGITAL ADJUST", and NRS-H, GAMMA R, G and B in "LCD ADJUST".

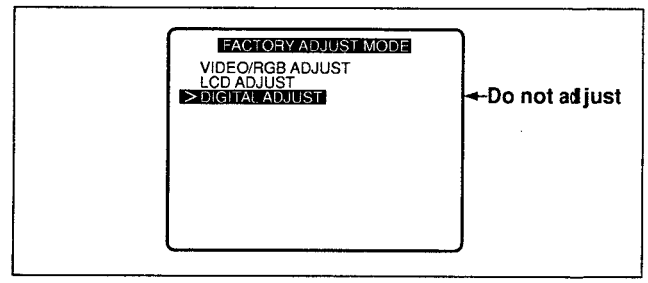


Fig. I2

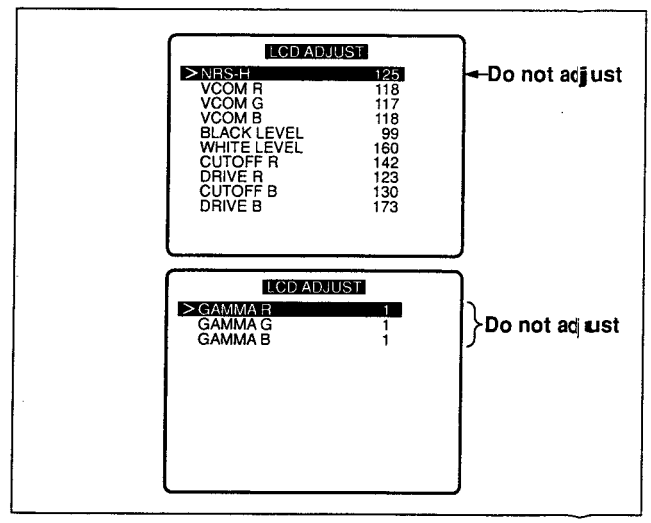


Fig. I3

2. TEST EQUIPMENT

To do all of these adjustments, the following equipment is required.

1. Dual-Trace Oscilloscope
   Voltage Range : 0.001~50V/Div.
   Frequency Range : DC~50MHz
   Probes : 10:1, 1:1
2. NTSC Video Pattern Generator
3. Plastic Tip Driver and Non-Metal Driver
4. (+) Screwdriver and (–) Screwdriver
5. Hexagon Wrench (2.5mm)
6. Standard Screen
7. DVM (Digital Volt Meter)
8. SECAM Video Pattern Generator
9. Test pattern signal (not supplied)

3. HOW TO READ THE ADJUSTMENT PROCEDURES

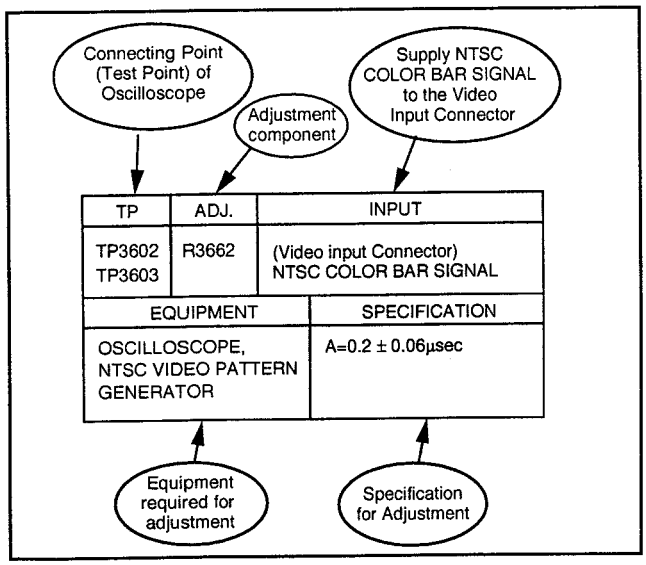


Fig. E1-1

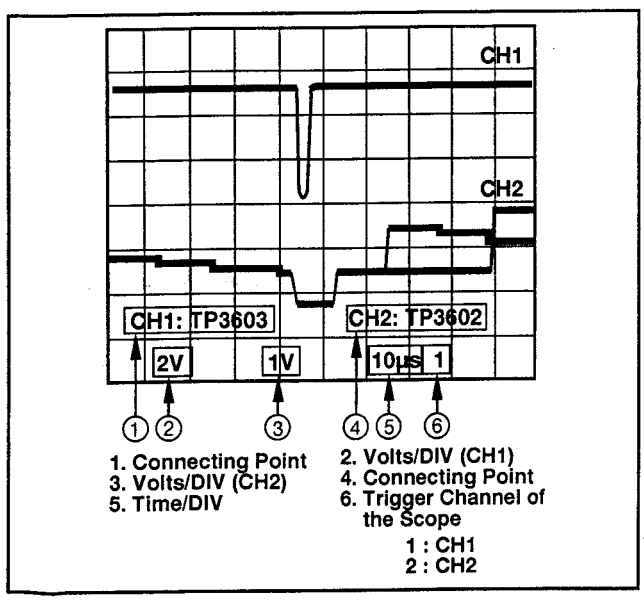


Fig. E1-2

4. ADJUSTMENT PROCEDURES

Preparation for Adjustments 1 through 4

1. Connect a jumper wire between TP6014 and TP6015 on Main C.B.A. for over 5 seconds to set to "FACTORY ADJUST MODE".
2. Press "∧" or "∨" button on remote control to select "LCD ADJUST" mode, and press "<" or ">" button to set to "LCD ADJUST" mode.

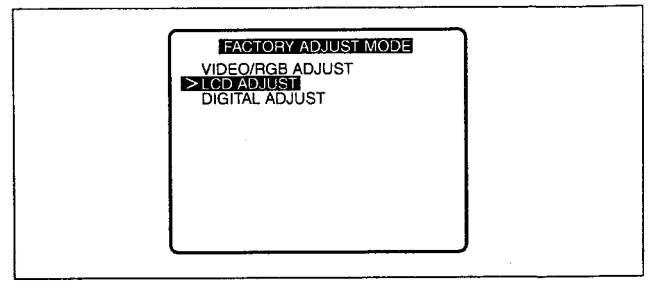


Fig. E2-1

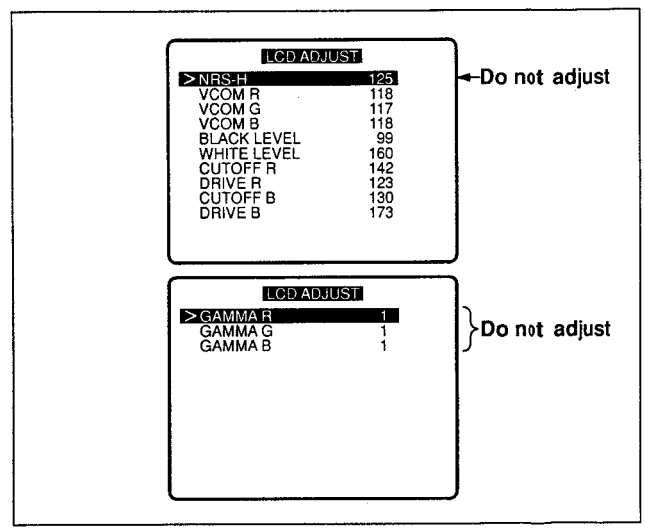


Fig. E2-2

3. After completing adjustments 1 through 4, press the "MENU" button to release from "LCD ADJUST" mode. (Adjustment data is memorized in EEPROM IC(IC6004, IC6005) by pressing "MENU" button.) Otherwise, adjustment data 1 through 4 will be cancelled.

1. LCD COMMON ADJUSTMENT

Purpose:
To set the optimum LCD common voltage.
Symptom of Misadjustment:
The picture will be bluish or reddish.

TP	ADJ.	INPUT
		(RGB Input Connector) 70% Red Horizontal Signal 70% Green Horizontal Signal 70% Blue Horizontal Signal
EQUIPMENT		SPECIFICATION
TEST PATTERN SIGNAL		Refer to Description below

Note:
This adjustment should be done in a darkroom.

1. Supply 70% Red Horizontal Signal and project on the screen.
2. Press "∧" or "∨" button on remote control to select "VCOM R".
3. Press "<" or ">" button so that the flicker on the whole screen becomes minimal.
4. Supply 70% Green Horizontal Signal and project on the screen.
5. Press "∧" or "∨" button on remote control to select "VCOM G".
6. Press "<" or ">" button so that the flicker on the whole screen becomes minimal.
7. Supply 70% Blue Horizontal Signal and project on the screen.
8. Press "∧" or "∨" button remote control to select "VCOM B".
9. Press "<" or ">" button so that the flicker on the whole screen becomes minimal.

Note:
When the flicker is hard to see in the screen in step 1, 4, 7, press "∧" or "∨" button on remote control to select "BLACK LEVEL", and press "<" or ">" button so that it appears.
However, be sure to return "BLACK LEVEL" to previous value after LCD COMMON adjustment.

2. BLACK LEVEL ADJUSTMENT

Purpose:
To set the optimum signal level.
Symptom of Misadjustment:
The picture will be too light or too dark.

TP	ADJ.	INPUT
TP3505		(RGB Input Connector) GRAY SCALE PATTERN SIGNAL (3 SCALE)
EQUIPMENT		SPECIFICATION
OSCILLOSCOPE TEST PATTERN SIGNAL		A=2.2 ± 0.05 VDC

Note:
TP3505: Main C.B.A.

1. Supply Gray Scale Pattern Signal (3 scales).
2. Press " ∧ " or " ∨ " button on remote control to select "BLACK LEVEL".
3. Press "<" or ">" button so that level A becomes 2.2±0.05 VDC.

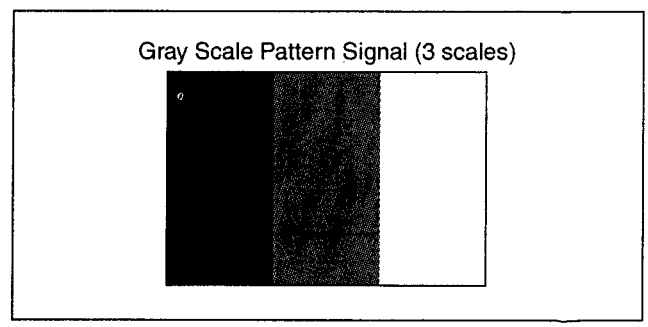


Fig. E3-1

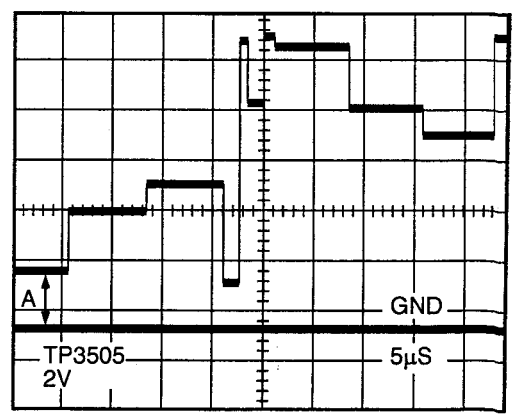


Fig. E3-2

3. WHITE LEVEL ADJUSTMENT

Purpose:
To set the optimum signal level.
Symptom of Misadjustment:
The picture will be too light or too dark.

TP	ADJ.	INPUT
		(RGB INPUT Connector) GREEN LEVEL ADJUSTMENT SIGNAL
EQUIPMENT		SPECIFICATION
TEST PATTERN SIGNAL		Refer to Description below

Note:
This adjustment should be done in a darkroom.

1. Supply Green Level Adjustment Signal and project on the screen.
2. Press " ∧ " or " ∨ " button on remote control to select "WHITE LEVEL".
3. Press "<" or ">" button so that Portion (B) are unvisible and Portion (A) are visible on the screen.

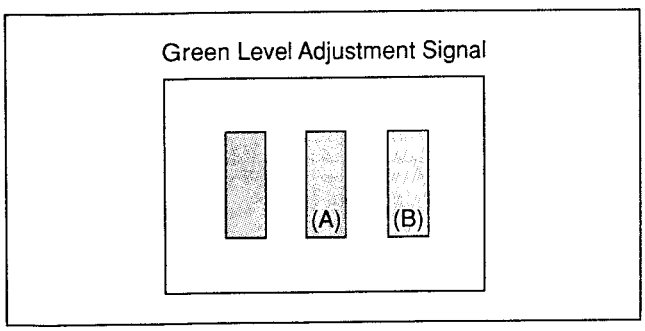


Fig. E4

4. WHITE BALANCE ADJUSTMENT

Purpose:
To set the standard white level for each colour temperature.
Symptom of Misadjustment:
White will become bluish or reddish.

TP	ADJ.	INPUT
		(VIDEO Input Connector) GRAY SCALE PATTERN SIGNAL (10 scales)
EQUIPMENT		SPECIFICATION
NTSC VIDEO PATTERN GENERATOR		Refer to Description below

Note:
This adjustment should be done in a darkroom.

1. Supply Gray Scale Pattern Signal (10 scales) and Project on the screen.
2. Press " ∧ " or " ∨ " button on remote control to select "CUTOFF R" or "CUTOFF B".
3. Press "<" or ">" button to adjust "CUTOFF R" or "CUTOFF B" so that the area around 3rd and 4th scale (A) becomes pure gray with no red or blue tint.
4. Press " ∧ " or " ∨ " button on remote control to select "DRIVE R" or "DRIVE B".
5. Press "<" or ">" button to adjust "DRIVE R" or "DRIVE B" so that the area around 7th and 8th scale (B) becomes pure gray with no red or blue tint.
6. Repeat step 2 through 5 so that all the scales become pure gray with no red or blue tint.

Note:
After completing adjustments, press the "MENU" button to release from "LCD ADJUST" mode. (Adjustment data is memorized in EEPROM IC(IC6004, IC6005) by pressing "MENU" button.) Otherwise, adjustment data 1 through 4 will be cancelled.

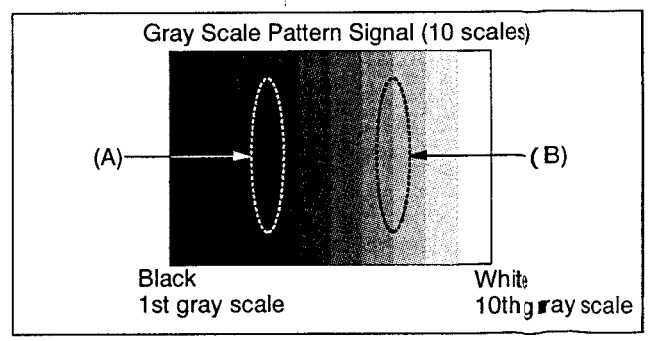


Fig. E5

5. GREEN FOCUS ADJUSTMENT

Purpose:
To set the focus over the whole screen.
Symptom of Misadjustment:
The picture will be out of focus.

TP	ADJ.	INPUT
	LCD GREEN UNIT	(RGB IN Connector) GREEN CROSSHATCH PATTERN SIGNAL
EQUIPMENT		SPECIFICATION
TEST PATTERN SIGNAL		Refer to Description below

1. Supply Green crosshatch pattern signal and Project on the screen.
2. Rotate the zoom ring on the projection lens to the wide setting.
3. Rotate the focus ring and adjust the focus on the lower centre of the screen (Portion ①).
4. Loosen screws (A) and (B) of LCD Green Unit.
5. Insert a (-) screwdriver into Portion (a) and twist it to adjust the focus on the upper right portion of the screen (Portion ②).
   After the adjustment, tighten screw (A) slightly.
6. Insert a (-) screwdriver into Portion (b) and twist it to adjust the focus on the upper left portion of the screen (Portion ③).
   After the adjustment, tighten screw (B) slightly.
7. Confirm that the lower centre portion of the screen (Portion ①) is in focus. If it is out of focus, repeat steps 3 through 6.
8. Confirm that the whole screen is in focus, and then tighten screws (A) and (B).

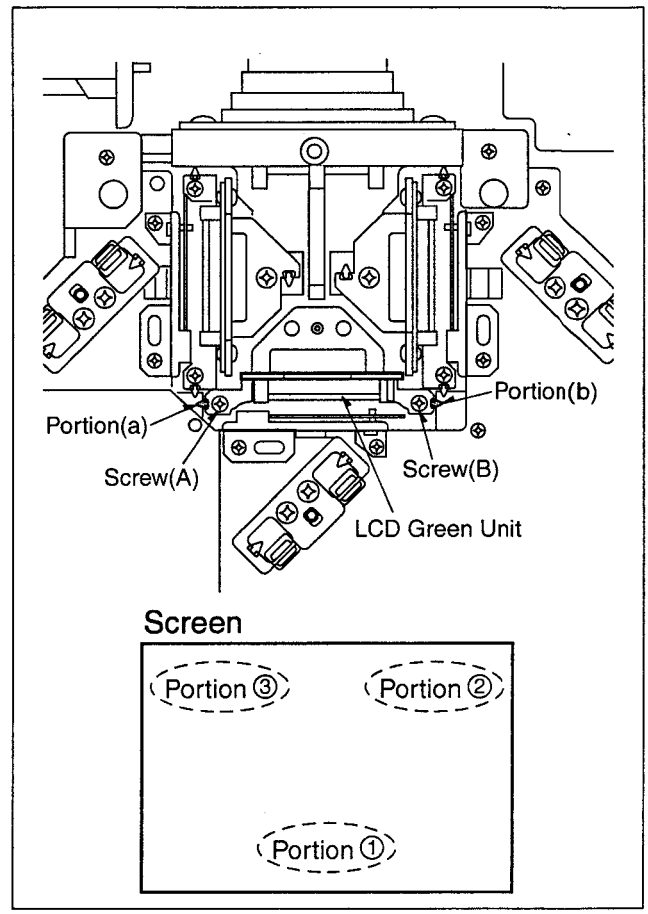


Fig. E6

Note:
Do not rotate the focus ring which is set in step 3 until both Blue and Red focus adjustment are completed.

6. RED FOCUS ADJUSTMENT

Purpose:
To set the focus over the whole screen.
Symptom of Misadjustment:
The picture will be out of focus.

TP	ADJ.	INPUT
	LCD RED UNIT	(RGB Input Connector) RED CROSSHATCH PATTERN SIGNAL

EQUIPMENT	SPECIFICATION
TEST PATTERN SIGNAL	Refer to Description below

Set Up:

1) If you replace LCD Red Unit, perform
   - Supply Green Crosshatch Pattern Signal and project on the screen.
   - Rotate the focus ring so that the whole screen is in focus.

1. Supply Red Crosshatch Pattern Signal and project on the screen.
2. Loosen screws (A), (B) and (C) of LCD Red Unit.
3. Insert a (-) screwdriver into Portion (a) and twist it to adjust the focus on the lower centre portion of the screen (Portion ①).
   After the adjustment, tighten screw (A) slightly.
4. Insert a (-) screwdriver into Portion (b) and twist it to adjust the focus on the upper right portion of the screen (Portion ②).
   After the adjustment, tighten screw (B) slightly.
5. Insert a (-) screwdriver into Portion (c) and twist it to adjust the focus on the upper left portion of the screen (Portion ③).
   After the adjustment, tighten screw (C) slightly.
6. Confirm that the lower centre portion of the screen (Portion ①) is in focus. If it is out of focus, repeat steps 3 through 5.
7. Confirm that the whole screen is in focus, and then tighten screws (A), (B), and (C).

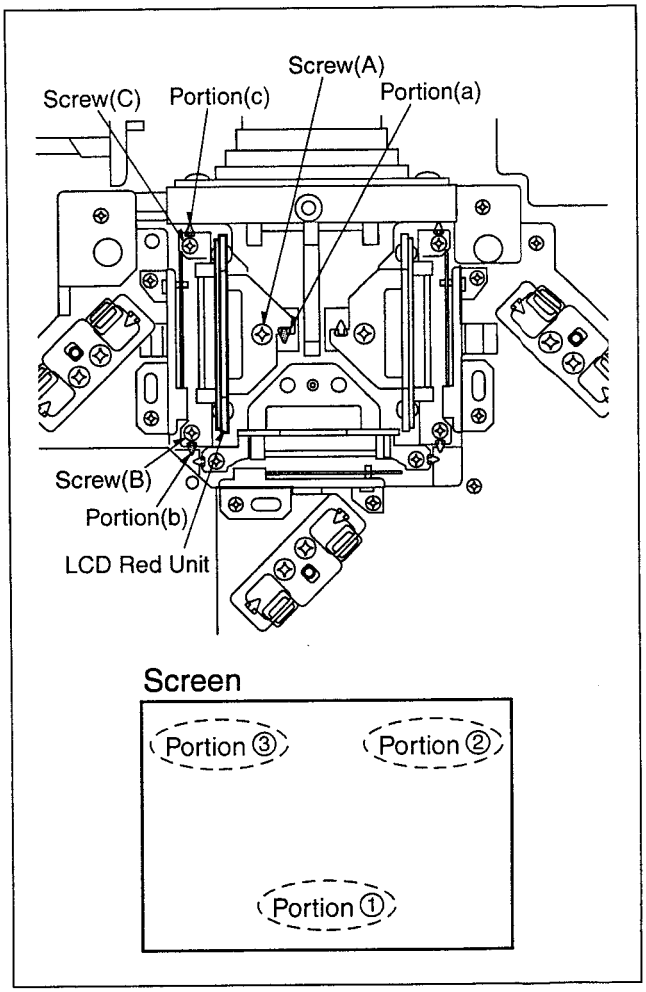


Fig.E7

7. BLUE FOCUS ADJUSTMENT

Purpose:
To set the focus over the whole screen.
Symptom of Misadjustment:
The picture will be out of focus.

TP	ADJ.	INPUT
	LCD BLUE UNIT	(RGB Input Connector) BLUE CROSSHATCH PATTERN SIGNAL
EQUIPMENT		SPECIFICATION
TEST PATTERN SIGNAL		Refer to Description below

Set Up:

1) If you replace LCD Blue Unit, perform
   - Supply Green Crosshatch Pattern Signal and project on the screen.
   - Rotate the focus ring so that the whole screen is in focus.

1. Supply Blue Crosshatch Pattern Signal and project on the screen.
2. Loosen screws (A), (B) and (C) of LCD Blue Unit.
3. Insert a (-) screwdriver into Portion (a) and twist it to adjust the focus on the lower centre portion of the screen (Portion ①).
   After the adjustment, tighten screw (A) slightly.
4. Insert a (-) screwdriver into Portion (b) and twist it to adjust the focus on the upper right portion of the screen (Portion ②).
   After the adjustment, tighten screw (B) slightly.
5. Insert a (-) screwdriver into Portion (c) and twist it to adjust the focus on the upper left portion of the screen (Portion ③).
   After the adjustment, tighten screw (C) slightly.
6. Confirm that the lower centre portion of the screen (Portion ①) is in focus. If it is out of focus, repeat steps 3 through 5.
7. Confirm that the whole screen is in focus, and then tighten screws (A), (B), and (C).

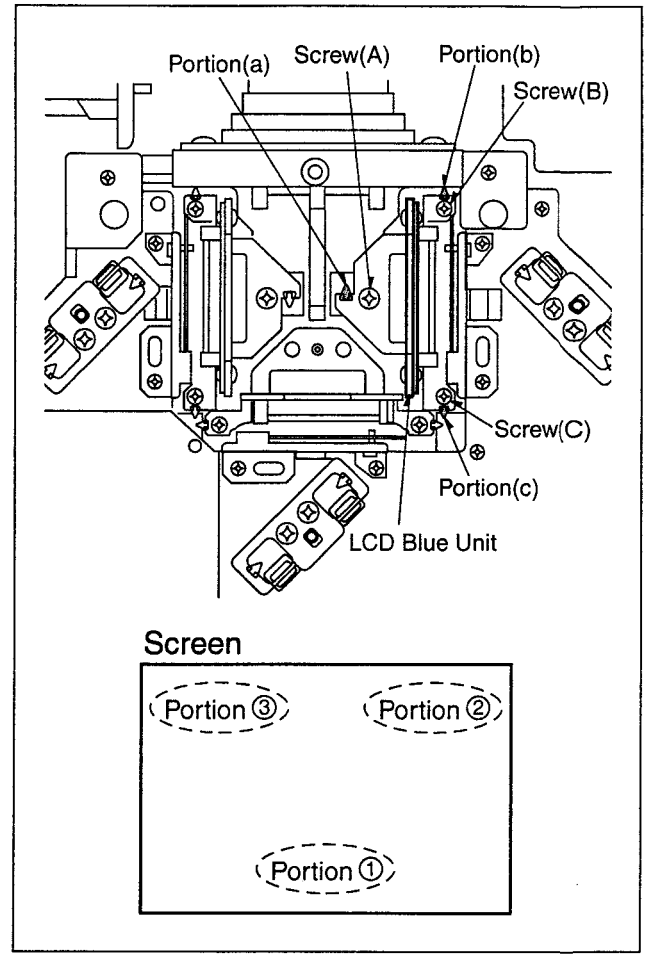


Fig. E8

8. LCD CONVERGENCE ADJUSTMENT

Purpose:
To set the uniform convergence over the whole screen.
Symptom of Misadjustment:
The convergence on the screen will vary.

TP	ADJ.	INPUT
	LCD BLUE UNIT LCD RED UNIT	(RGB Input Connector) CROSSHATCH PATTERN SIGNAL

EQUIPMENT	SPECIFICATION
TEST PATTERN SIGNAL	Refer to Description below

1. Supply Crosshatch Pattern Signal and project on the screen.
2. (R-G Adjustment)
   Loosen 2 Hexagon screws (A) of LCD RED Unit as shown in Fig. E9-1.
   Grasp the Adjust Plate (a) and move the plate so that the Red line exactly overlaps the Green line as shown in Fig. E9-2.
3. Tighten 2 Hexagon screws (A) with a Hexagon Wrench.
4. (B-G Adjustment)
   Loosen 2 Hexagon screws (B) of LCD BLUE Unit as shown in Fig. E9-1.
   Grasp the Adjust Plate (b) and move the plate so that the Blue line exactly overlaps the Green line as shown in Fig. E9-2.
5. Tighten 2 Hexagon screws (B) with a Hexagon Wrench.

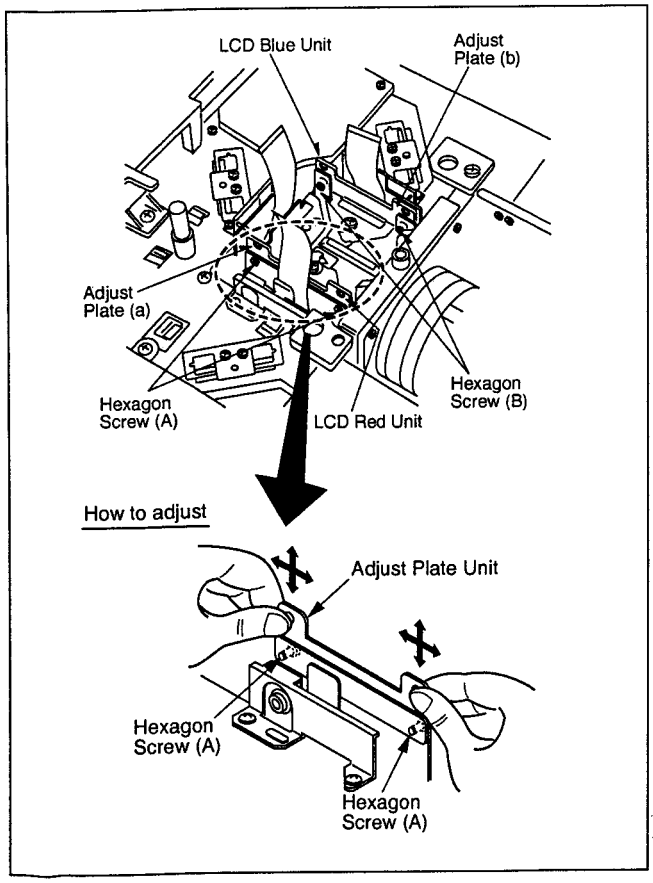


Fig. E9-1

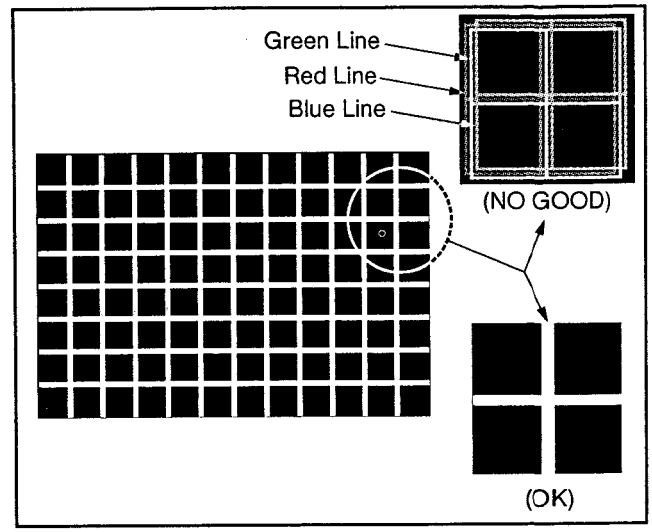


Fig. E9-2

Note:
Use a Hexagon Wrench (2.5 mm) for Hexagon screw (A) and screw (B).

9. POLARIZER ADJUSTMENT

Purpose:
To set the polarizer in the proper position.
Symptom of Misadjustment:
The picture will become bluish or reddish or greenish.

TP	ADJ.	INPUT
	POLARIZER RED POLARIZER GREEN POLARIZER BLUE	(RGB Input Connector) BLACK SIGNAL (0%)
EQUIPMENT		SPECIFICATION
TEST PATTERN SIGNAL		Refer to Description below

1. POLARIZER RED ADJUSTMENT

1) Insert a black paper in the gap between the LCD Unit and the Polarizer Unit and shut out the light completely for the G and B light paths.
2) Supply Black Signal (0%) and project on the screen.
3) Loosen a Hexagon Screw (A) of Polarizer Red Unit.
4) Move the Polarizer Red Unit to the right and left so that the whole screen becomes the blackest possible value, and then tighten a Hexagon Screw (A) with a Hexagon Wrench.

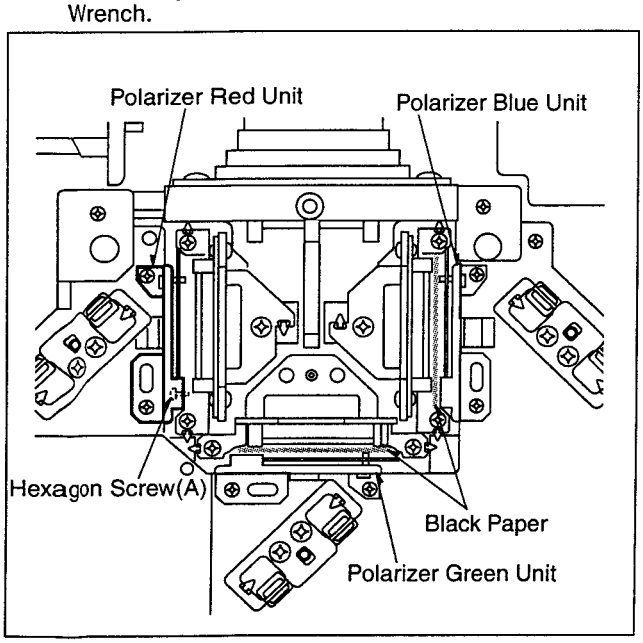


Fig. E10-1

2. POLARIZER GREEN ADJUSTMENT

1) Insert a black paper in the gap between the LCD Unit and the Polarizer Unit and shut out the light completely for the R and B light paths.
2) Supply Black Signal (0%) and project on the screen.
3) Loosen a Hexagon Screw (B) of Polarizer Green Unit.
4) Move the Polarizer Green Unit to the right and left so that the whole screen becomes the blackest possible value, and then tighten a Hexagon Screw (B) with a Hexagon Wrench.

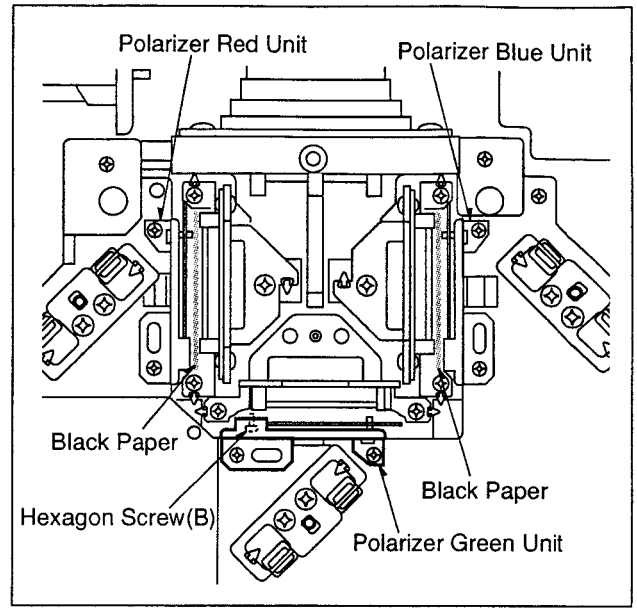


Fig. E10-2

3. POLARIZER BLUE ADJUSTMENT

1) Insert a black paper in the gap between the LCD Unit and the Polarizer Unit and shut out the light completely for the R and G light paths.
2) Supply Black Signal (0%) and project on the screen.
3) Loosen a Hexagon Screw (C) of Polarizer Blue Unit.
4) Move the Polarizer Blue Unit to the right and left so that the whole screen becomes the blackest possible value, and then tighten a Hexagon Screw (C) with a Hexagon Wrench.

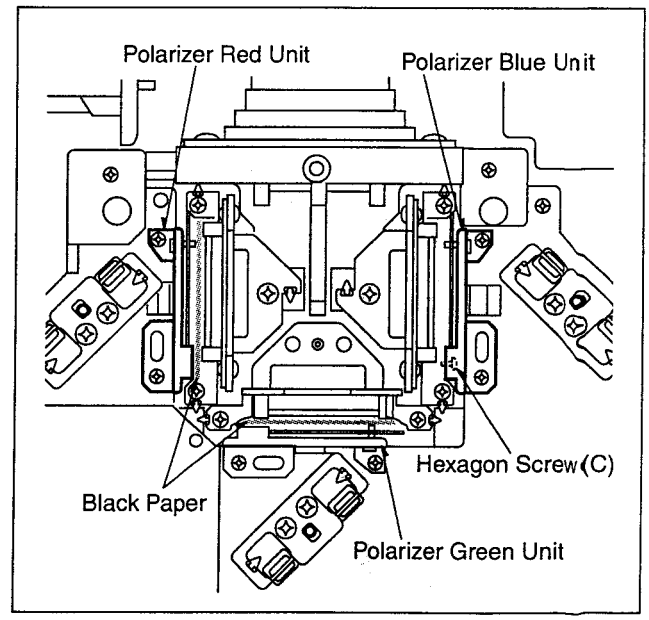


Fig. E10-3

Note:
Use a Hexagon Wrench (2.5 mm) for Hexagon screw (A), screw (B) and screw (C).

10. FULL MIRROR ADJUSTMENT

Purpose:
To set the Full Mirror in the proper position.
Symptom of Misadjustment:
The non uniformity of green will appear.

TP	ADJ.	INPUT
	FULL MIRROR GREEN FULL MIRROR RED FULL MIRROR BLUE	(RGB Input Connector) 100% GREEN SIGNAL 100% YELLOW SIGNAL 100% WHITE SIGNAL

EQUIPMENT	SPECIFICATION
TEST PATTERN SIGNAL	Refer to Description below

Adjustment:

Adjust the right and left sides of the screen by adjusting portion (a), portion (b) or portion (c) and adjust the top and bottom sides of the screen by adjusting back and forth direction.

1. FULL MIRROR-GREEN ADJUSTMENT

1) Supply 100% Green Signal and project on the screen.
2) Loosen a screw of the Full Mirror Green.
3) Insert a (-) screwdriver into Portion (a) and move the Full Mirror Green in the direction shown by the arrows so that colour uniformity is achieved over the whole screen. And then tighten screw (A).

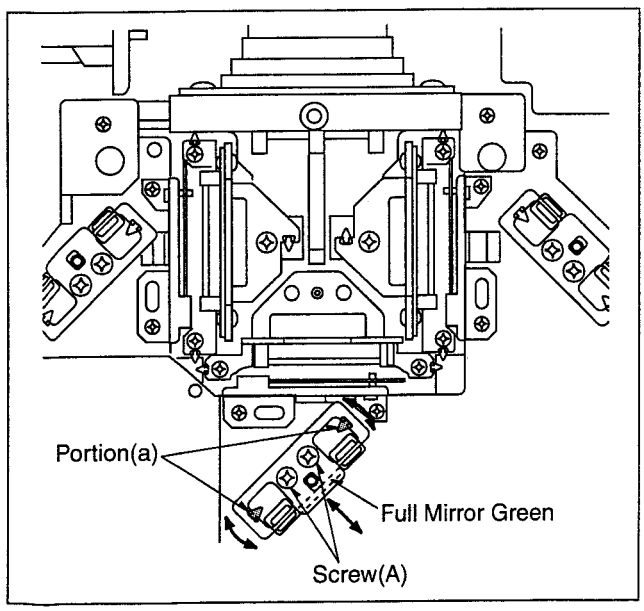


Fig. E11-1

2. FULL MIRROR-RED ADJUSTMENT

1) Supply 100% Yellow Signal and project on the screen.
2) Loosen a screw of the Full Mirror Red.
3) Insert a (-) screwdriver into Portion (b) and move the Full Mirror Red in the direction shown by the arrows so that colour uniformity is achieved over the whole screen. And then tighten screw (B).

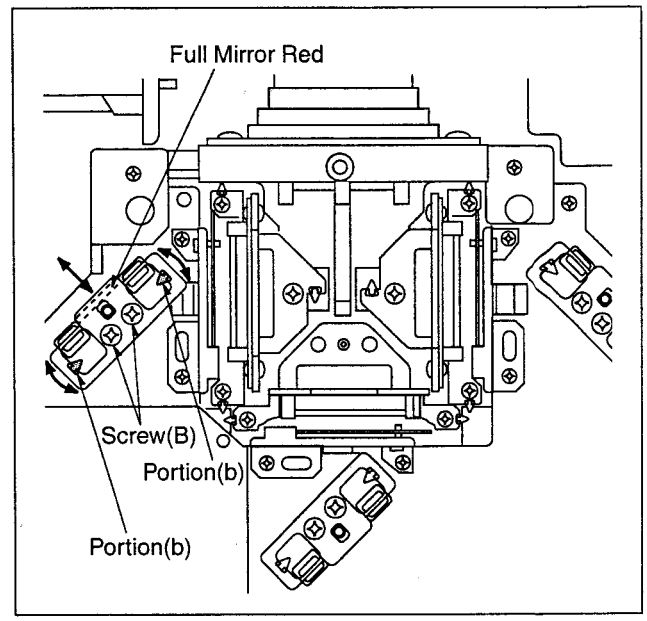


Fig. E11-2

3. FULL MIRROR-BLUE ADJUSTMENT

1) Supply 100% White Signal and project on the screen.
2) Loosen Screw of the Full Mirror Blue.
3) Insert a (-) screwdriver into Portion (c) and move the Full Mirror Blue in the direction shown by the arrows so that colour uniformity is achieved over the whole screen. And then tighten screw (C).

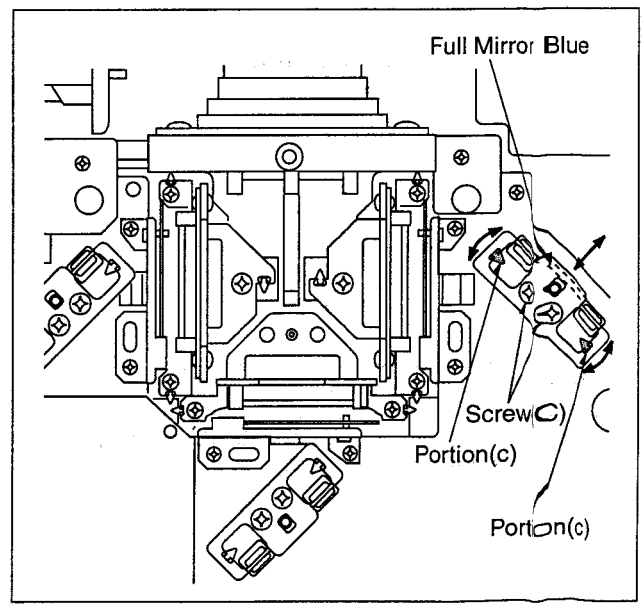


Fig. E11-3

Note:
Do not use excessive force when adjusting the Mirror. Otherwise, the Mirror may be damaged.

Preparation for Adjustments 11 through 19

1. Use the signal of SVGA 60Hz for PC input except for PLL Adjustment (Refer to adjustment 13).
2. Connect a jumper wire between TP6014 and TP6015 on Main C.B.A. for over 5 seconds to set to "FACTORY ADJUST MODE".
3. Press " ∧ " or " ∨ " button on remote control to select "VIDEO/RGB ADJUST" mode, and press "<" or ">" button to set to "VIDEO/RGB ADJUST" mode.

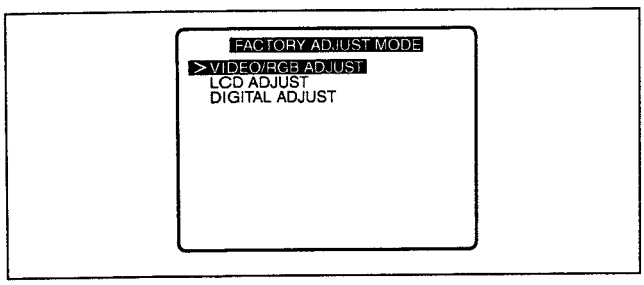


Fig. E12-1

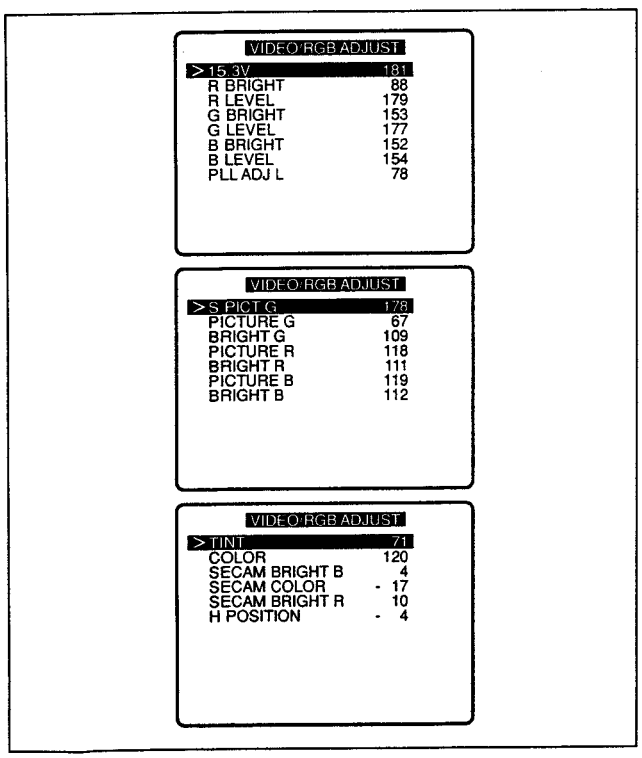


Fig. E12-2

4. After completing adjustments 11 through 19, press the "**MENU**" button to release from "VIDEO/RGB ADJUST" mode. (Adjustment data is memorized in EEPROM IC(IC6004, IC6005) by pressing "**MENU**" button.) Otherwise, adjustment data 11 through 19 will be cancelled.

11. LCD POWER VOLTAGE ADJUSTMENT

Purpose:
To set the standard voltage for LCD panel.
Symptom of Misadjustment:
LCD panel may be damaged.

TP	ADJ.	INPUT
TP1908 or TP1904 TP1907 (GND)		

EQUIPMENT	SPECIFICATION
DVM (DIGITAL VOLT METER)	15.3 ± 0.05VDC

Note:
TP1904, TP1907, TP1908: MAIN C.B.A.

1. Connect the DVM (Digital Volt Meter) to TP1904 or TP1908.
2. Press " ∧ " or " ∨ " button on the LCD Projector or remote control to select "15.3V".
3. Press "<" or ">" button so that the voltage shown in the display of DVM is 15.3 ± 0.05VDC.

12. RGB INPUT LEVEL ADJUSTMENT

Purpose:
To set the optimum signal level.
Symptom of Misadjustment:
The picture will be too light or too dark.

TP	ADJ.	INPUT
TP3501 TP3502 TP3503		(RGB Input Connector) GRAY SCALE PATTERN SIGNAL (3 SCALE)

EQUIPMENT	SPECIFICATION
OSCILLOSCOPE TEST PATTERN SIGNAL	Refer to Description below

Note:
TP3501, TP3502, TP3503: Main C.B.A.

1. Supply Gray Scale Pattern Signal (3 scales).
2. Connect the oscilloscope to TP3503.
3. Press " ∧ " or " ∨ " button on remote control to select "R BRIGHT".
3. Press "<" or ">" button so that Black level becomes the same as Blanking level.
4. Select "R LEVEL", and press "<" or ">" button so that White level becomes the same as REF level.
5. Connect the oscilloscope to TP3502.
6. Press " ∧ " or " ∨ " button on remote control to select "G BRIGHT".
7. Press "<" or ">" button so that Black level becomes the same as Blanking level.
8. Select "G LEVEL", and press "<" or ">" button so that White level becomes the same as REF level.
9. Connect the oscilloscope to TP3501.
10. Press " ∧ " or " ∨ " button on remote control to select "B BRIGHT".
11. Press "<" or ">" button so that Black level becomes the same as Blanking level.
12. Select "B LEVEL", and press "<" or ">" button so that White level becomes the same as REF level.

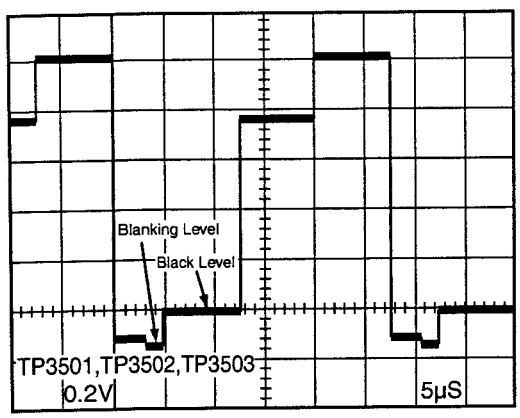


Fig. E13-1

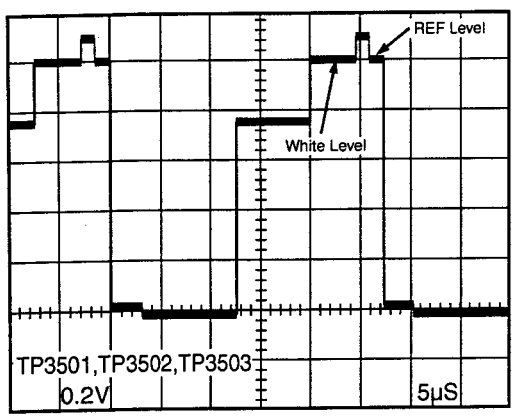


Fig. E13-2

13. PLL ADJUSTMENT

Purpose:
To set the optimum phase of SYNC.
Symptom of Misadjustment:
There is a case that it is not synchronized according to frequency of the input signal.

TP	ADJ.	INPUT
TP2001 TP1907 (GND)		(RGB Input Connector) SVGA60Hz VGA60Hz

EQUIPMENT	SPECIFICATION
DVM (DIGITAL VOLT METER)	2.25 ± 0.05VDC: SVGA60Hz 1.65 ± 0.05VDC: VGA60Hz

Note:
TP2001, TP1907: Main C.B.A.

(Set Up)
Set the refreshrate of the personal computer to 60Hz in "SCREEN" of "CONTROL PANEL".

1. Input signal of SVGA60Hz to RGB input connector.
2. Connect the DVM (Digital Volt Meter) to TP2001.
3. Press "∧" or "∨" button on remote control to select "PLL ADJ H".
4. Press "<" or ">" button so that the voltage shown in the display of DVM is 2.25 ± 0.05VDC.
5. Input signal of VGA60Hz to RGB input connector.
6. Press "∧" or "∨" button on remote control to select "PLL ADJ L".
7. Press "<" or ">" button so that the voltage shown in the display of DVM is 1.65 ± 0.05VDC.

Note:
When input signal is changed, "PLL ADJ H" and "PLL ADJ L" in the display switch automatically.

14. S-VIDEO INPUT ADJUSTMENT

Purpose:
To set the optimum signal level.
Symptom of Misadjustment:
The picture will be too light or too dark.

TP	ADJ.	INPUT
TP5003		(S-VIDEO Input Connector) NTSC COLOUR BAR
EQUIPMENT		SPECIFICATION
OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR		A=2.4V ± 0.03Vp-p

Note:
TP5003: Main C.B.A.

1. Supply NTSC Colour Bar Signal.
2. Press " ∧ " or " ∨ " button on remote control to select "S PICT G".
3. Press "<" or ">" button so that the level A becomes 2.4 ± 0.03VDC.

Note:
Be sure to adjust "VIDEO INPUT", "VIDEO COLOUR", and "SECAM COLOUR" after adjusting "S-VIDEO INPUT".

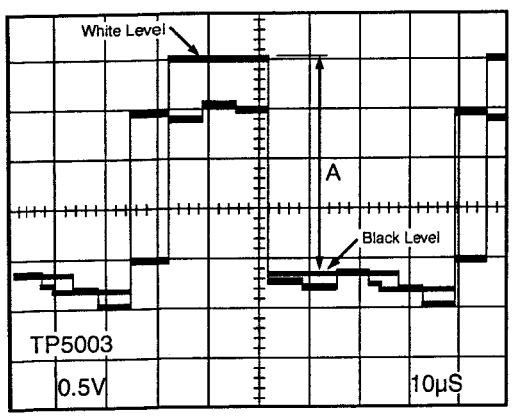


Fig. E14

15. VIDEO INPUT ADJUSTMENT

Purpose:
To set the optimum signal level.
Symptom of Misadjustment:
The picture will be too light or too dark.

TP	ADJ.	INPUT
TP5002 TP5003 TP5004		(VIDEO Input Connector) GRAY SCALE PATTERN SIGNAL (10 SCALE)
EQUIPMENT		SPECIFICATION
OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR		A=2.4V ± 0.03Vp-p B=0 ± 0.01Vp-p

Note:
TP5002, TP5003, TP5004: Main C.B.A.

1. Supply Gray Scale Pattern Signal (10 scales).
2. Connect the oscilloscope to TP5003.
3. Press "∧" or "∨" button on remote control to select "PICTURE G".
4. Press "<" or ">" button so that the level A becomes 2.4 ± 0.03Vp-p.
5. Press " ∧ " or " ∨ " button on the LCD Projector or remote control to select "BRIGHT G".
6. Press "<" or ">" button so that the level B becomes 0 ± 0.01Vp-p.
7. Connect the oscilloscope to TP5004.
8. Press "∧" or "∨" button on remote control to select "PICTURE R".
9. Press "<" or ">" button so that the level A becomes 2.4 ± 0.03Vp-p.
10. Press " ∧ " or " ∨ " button on remote control to select "BRIGHT R".
11. Press "<" or ">" button so that the level A becomes 0 ± 0.01Vp-p.
12. Connect the oscilloscope to TP5002.
13. Press "∧" or "∨" button on remote control to select "PICTURE B".
14. Press "<" or ">" button so that the level A becomes 2.4 ± 0.03Vp-p.
15. Press " ∧ " or " ∨ " button on or remote control to select "BRIGHT B".
16. Press "<" or ">" button so that the level A becomes 0 ± 0.01Vp-p.

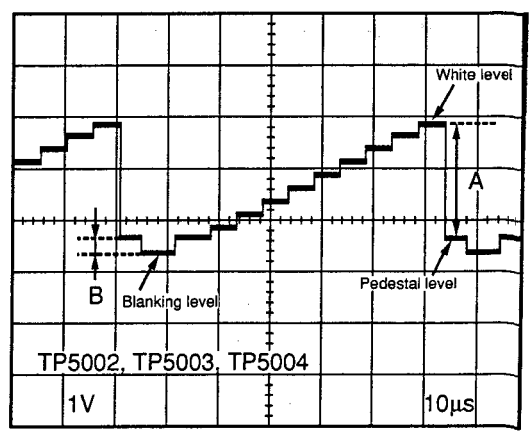


Fig. E15

16. VIDEO TINT ADJUSTMENT

Purpose:
To set the standard colour phase.
Symptom of Misadjustment:
The colour will have an unnatural tint.

TP	ADJ.	INPUT
TP5002		(VIDEO Input Connector) RAINBOW COLOUR BAR SIGNAL

EQUIPMENT	SPECIFICATION
OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR	Refer to Description below

Note:
TP5002: Main C.B.A.

1. Supply NTSC Rainbow Colour Bar Signal.
2. Press " ∧ " or " ∨ " button on remote control to select "TINT".
3. Press "<" or ">" button so that the level A and B becomes same level. Then press ">" twice to increase the Adjustment Value +2.

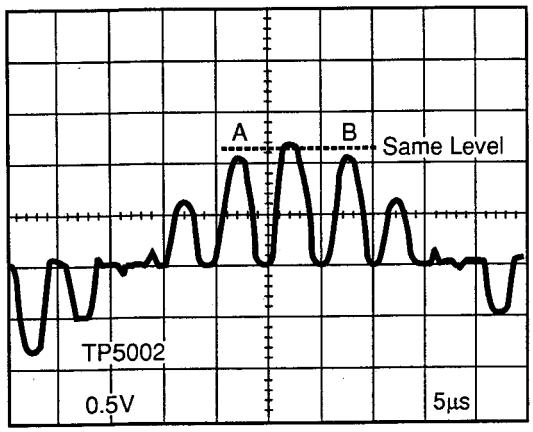


Fig. E16

17. VIDEO COLOUR ADJUSTMENT

Purpose:
To set the optimum signal level.
Symptom of Misadjustment:
The picture will be too vivid or too pale.

TP	ADJ.	INPUT
TP5002		(VIDEO Input Connector) NTSC COLOUR BAR SIGNAL

EQUIPMENT	SPECIFICATION
OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR	A=1.9 ± 0.01Vp-p

Note:
TP5002: Main C.B.A.

1. Supply NTSC Colour Bar Signal.
2. Press " ∧ " or " ∨ " button on remote control to select "COLOUR".
3. Press "<" or ">" button so that the level A becomes 1.9 ± 0.01Vp-p.

Note:
Be sure to adjust "SECAM COLOUR" after adjusting "VIDEO COLOUR".

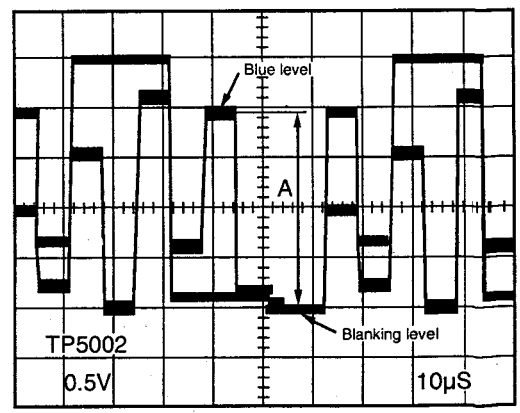


Fig. E17

18. SECAM COLOUR ADJUSTMENT

Purpose:
To set the optimum signal level.
Symptom of Misadjustment:
The picture will be too vivid or too pale.

TP	ADJ.	INPUT
TP5002 TP5004		(VIDEO Input Connector) SECAM COLOUR BAR SIGNAL
EQUIPMENT		SPECIFICATION
OSCILLOSCOPE SECAM VIDEO PATTERN GENERATOR		A=0 ± 0.02Vp-p B=1.9 ± 0.1Vp-p

Note:
TP5002, TP5004: Main C.B.A.

1. Supply SECAM Colour Bar signal.
2. Connect the oscilloscope to TP5002.
3. Press " ∧ " or " ∨ " button on remote control to select "SECAM BRIGHT B".
4. Press "<" or ">" button so that the level A becomes 0 ± 0.02Vp-p.
5. Press " ∧ " or " ∨ " button on remote control to select "SECAM COLOUR".
6. Press "<" or ">" button so that the level B becomes 1.9± 0.1Vp-p.
7. Connect the oscilloscope to TP5004.
8. Press " ∧ " or " ∨ " button on remote control to select "SECAM BRIGHT R".
9. Press "<" or ">" button so that the level A becomes 0 ± 0.02Vp-p.

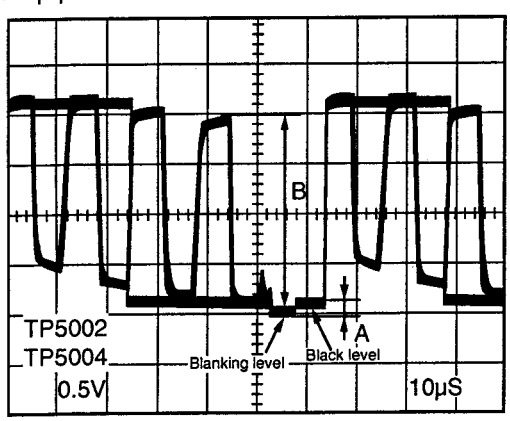


Fig. E18

19. SYNC PHASE ADJUSTMENT

Purpose:
To set the optimum phase of H.SYNC.
Symptom of Misadjustment:
The picture will be shift horizontally.

TP	ADJ.	INPUT
		(VIDEO Input Connector) NTSC MONO SCOPE SIGNAL
EQUIPMENT		SPECIFICATION
OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR		Refer to Description below

Note:
TP5001: Main C.B.A.

1. Supply NTSC Monoscope Signal and project on the screen.
2. Press " ∧ " or " ∨ " button on remote control to select "H POSITION".
3. Press "<" or ">" button so that the projected image becomes the centre.

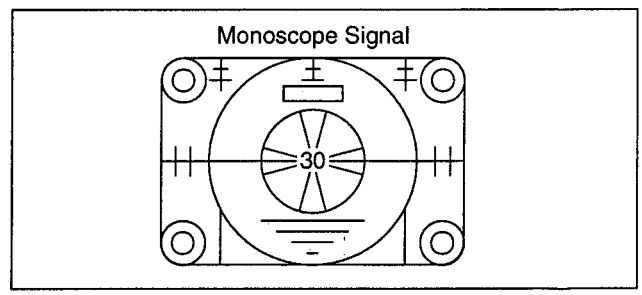
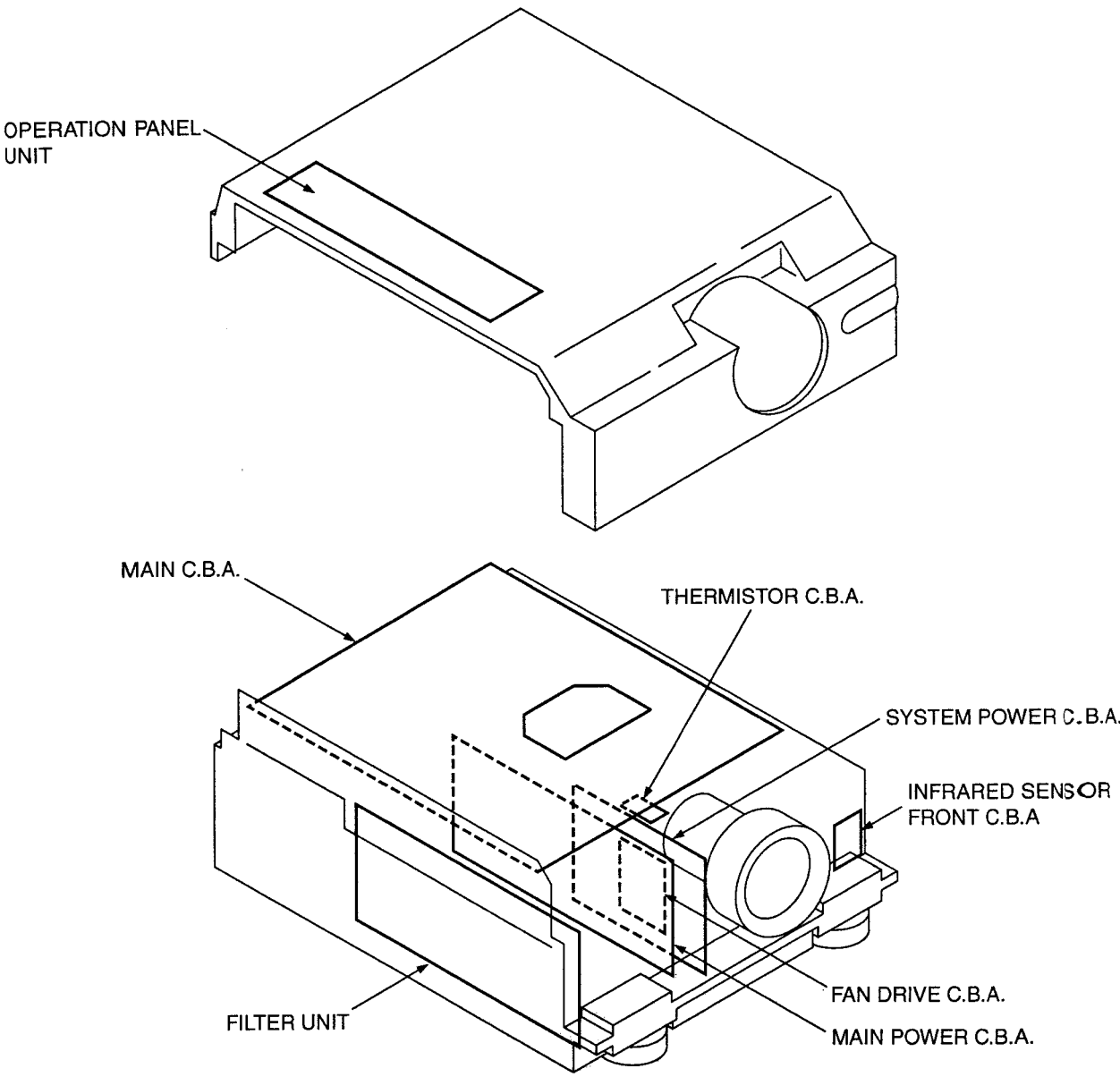


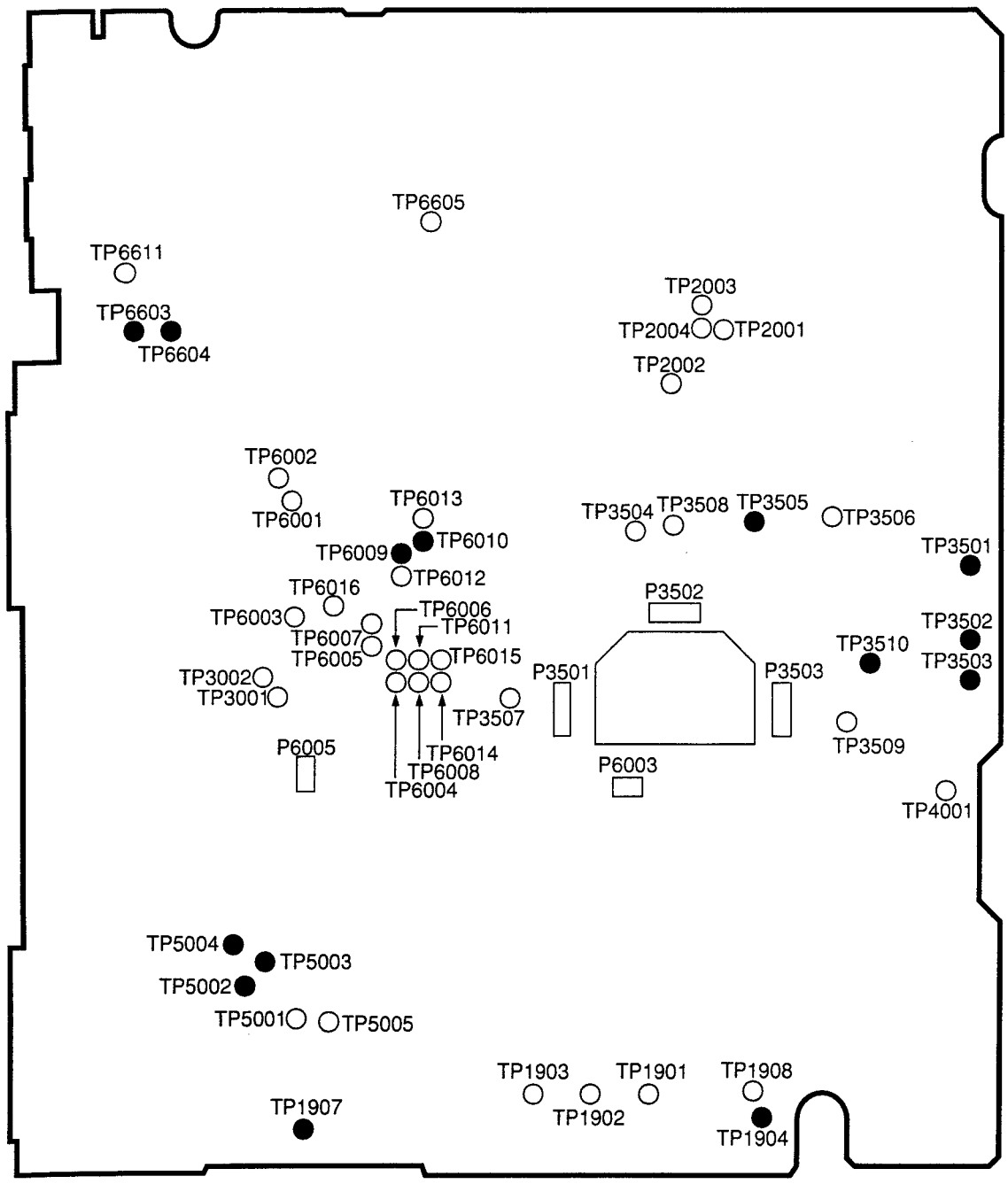
Fig. E19

Note:
After completing adjustments 11 through 19, press the "**MENU**" button to release from "VIDEO/RGB ADJUST" mode. (Adjustment data is memorized in EEPROM IC(IC6004, IC6005) by pressing "**MENU**" button.) Otherwise, adjustment data 11 through 19 will be cancelled.

LOCATION OF TEST POINT AND CIRCUIT BOARD

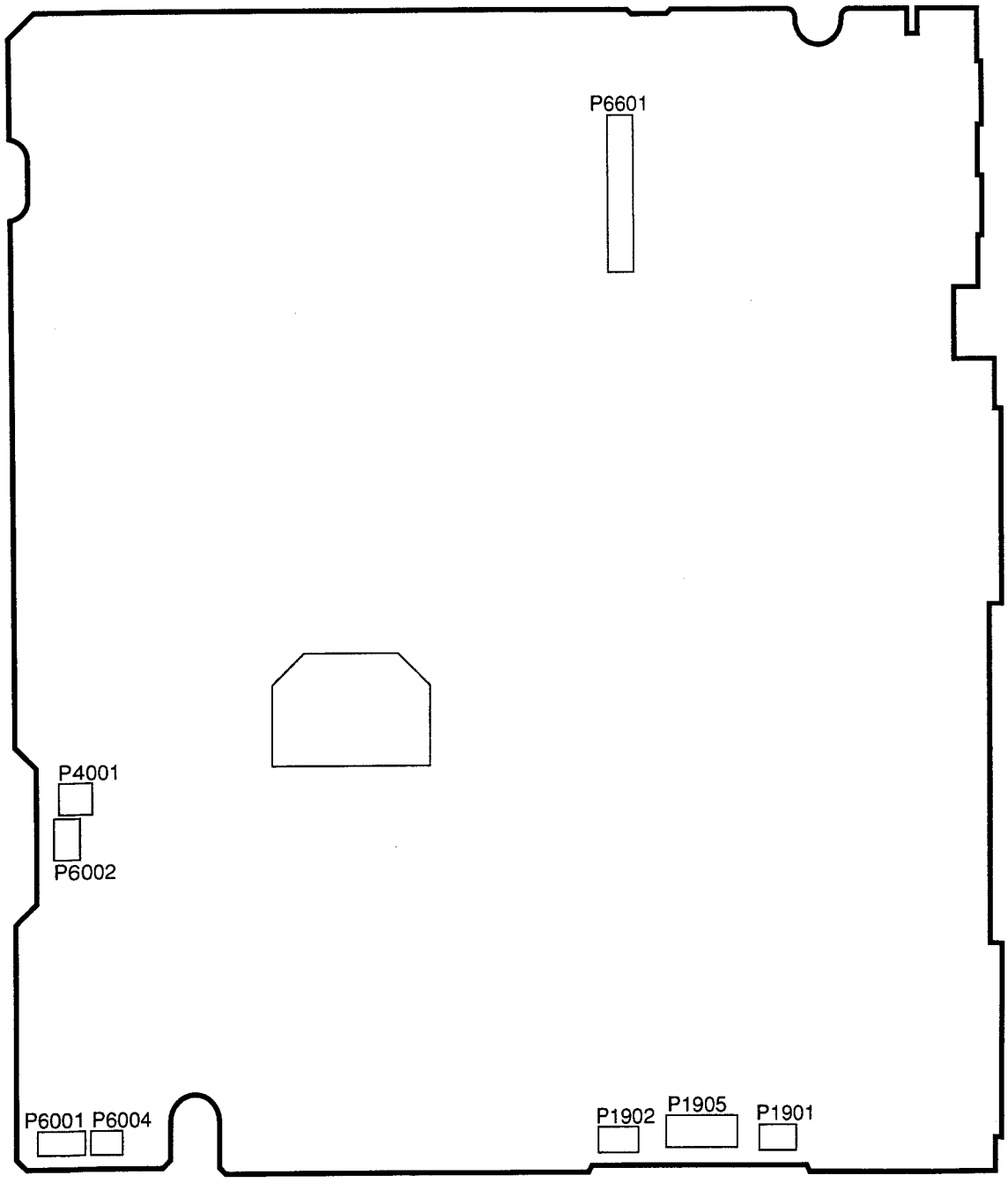


MAIN C.B.A.



(Foil Side)

MAIN C.B.A.

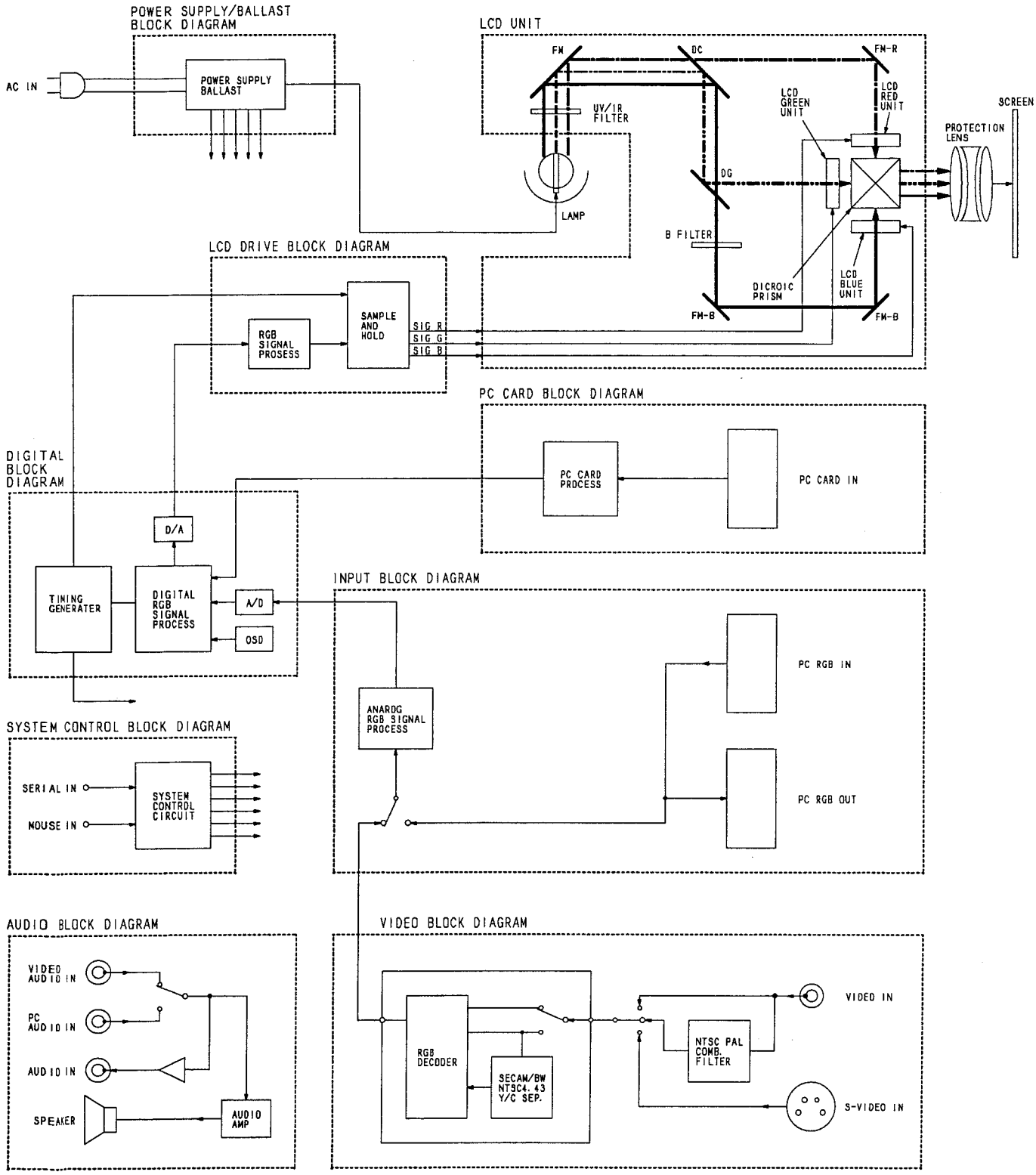


(Component Side)

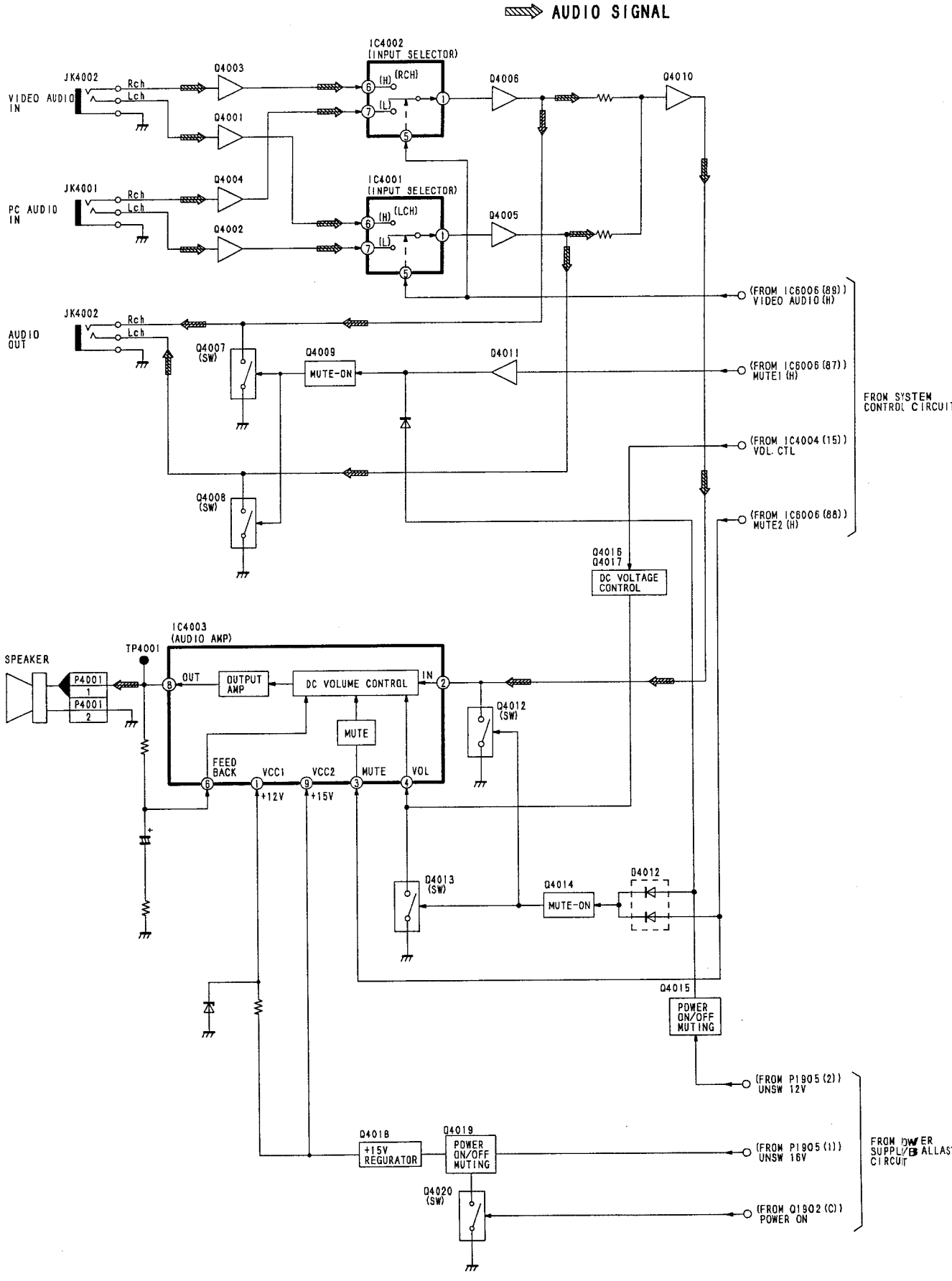
● Test Point with a Test Pin.
○ Test Point with no Test Pin.
▭ Connector

BLOCK DIAGRAM

OVERALL BLOCK DIAGRAM

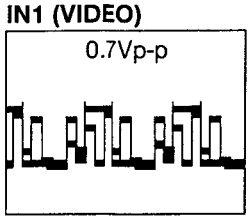


AUDIO PROCESS BLOCK DIAGRAM

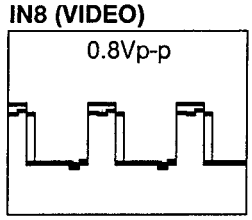


WAVEFORM OF INPUT PROCESS STAGE

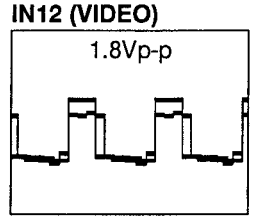
IN1 (VIDEO)



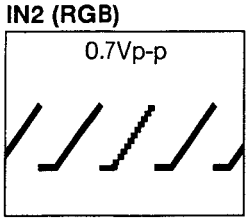
IN8 (VIDEO)



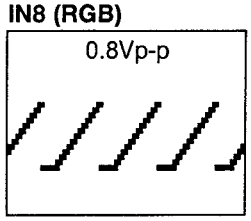
IN12 (VIDEO)



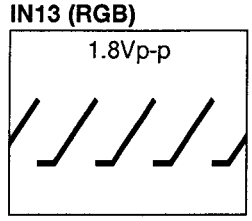
IN2 (RGB)



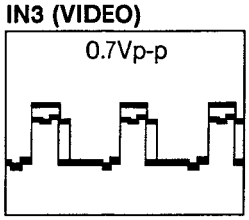
IN8 (RGB)



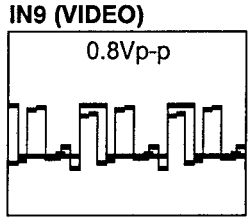
IN13 (RGB)



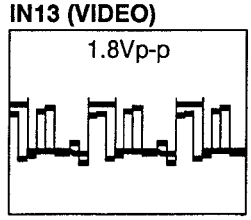
IN3 (VIDEO)



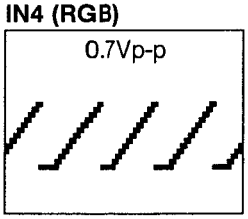
IN9 (VIDEO)



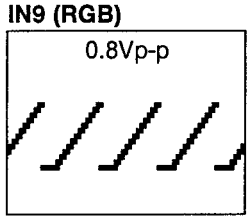
IN13 (VIDEO)



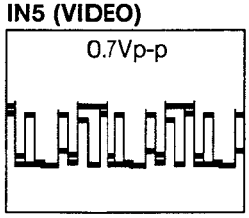
IN4 (RGB)



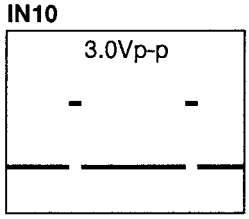
IN9 (RGB)



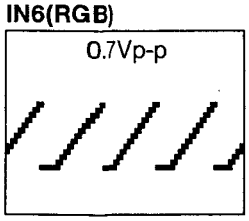
IN5 (VIDEO)



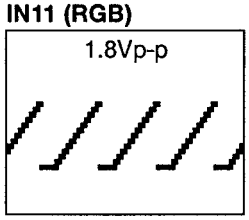
IN10



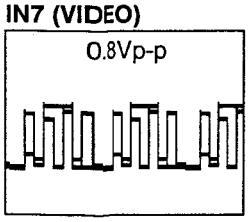
IN6(RGB)



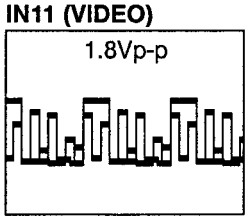
IN11 (RGB)



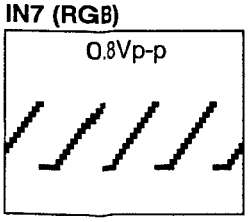
IN7 (VIDEO)



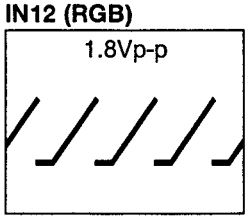
IN11 (VIDEO)



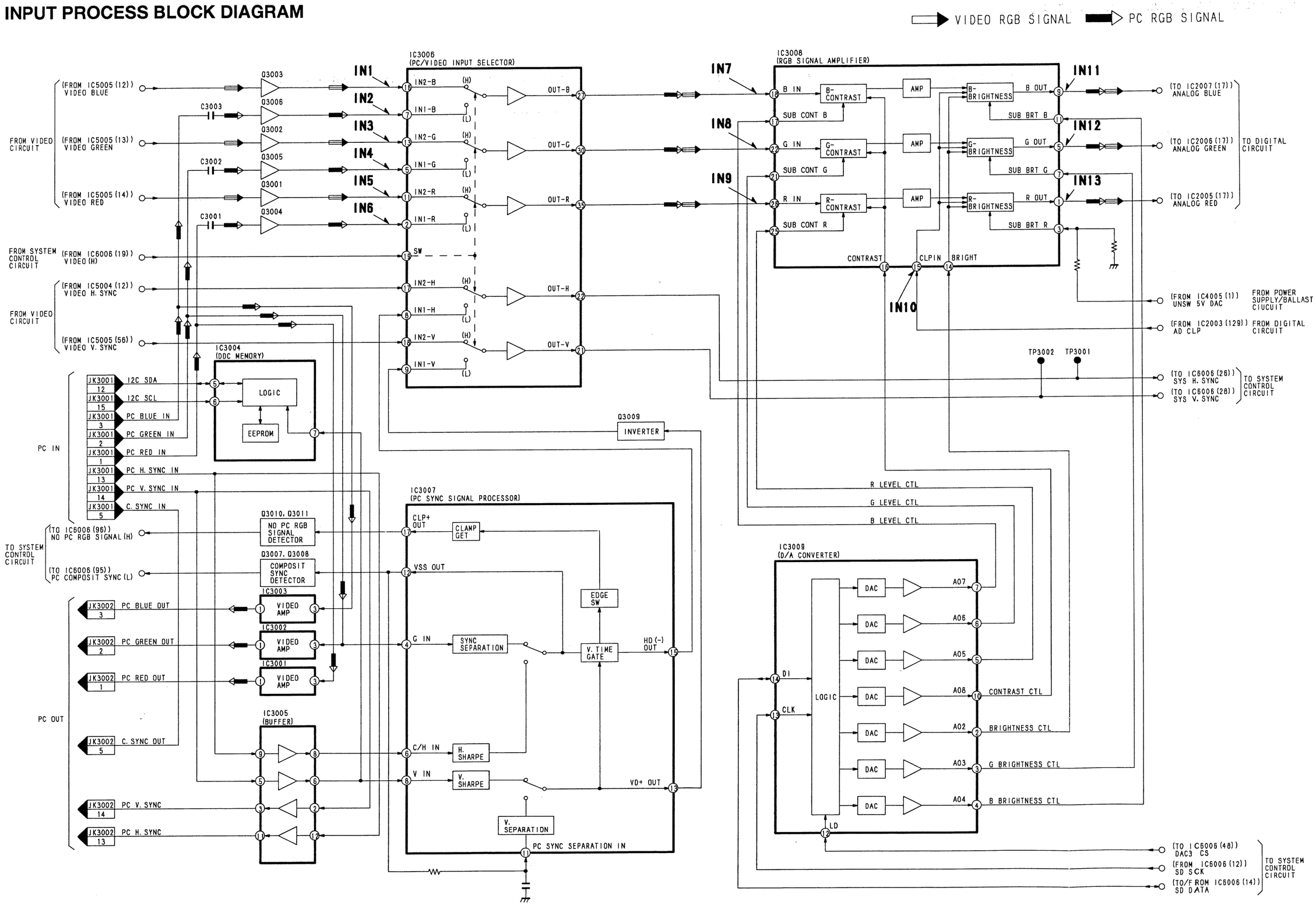
IN7 (RGB)



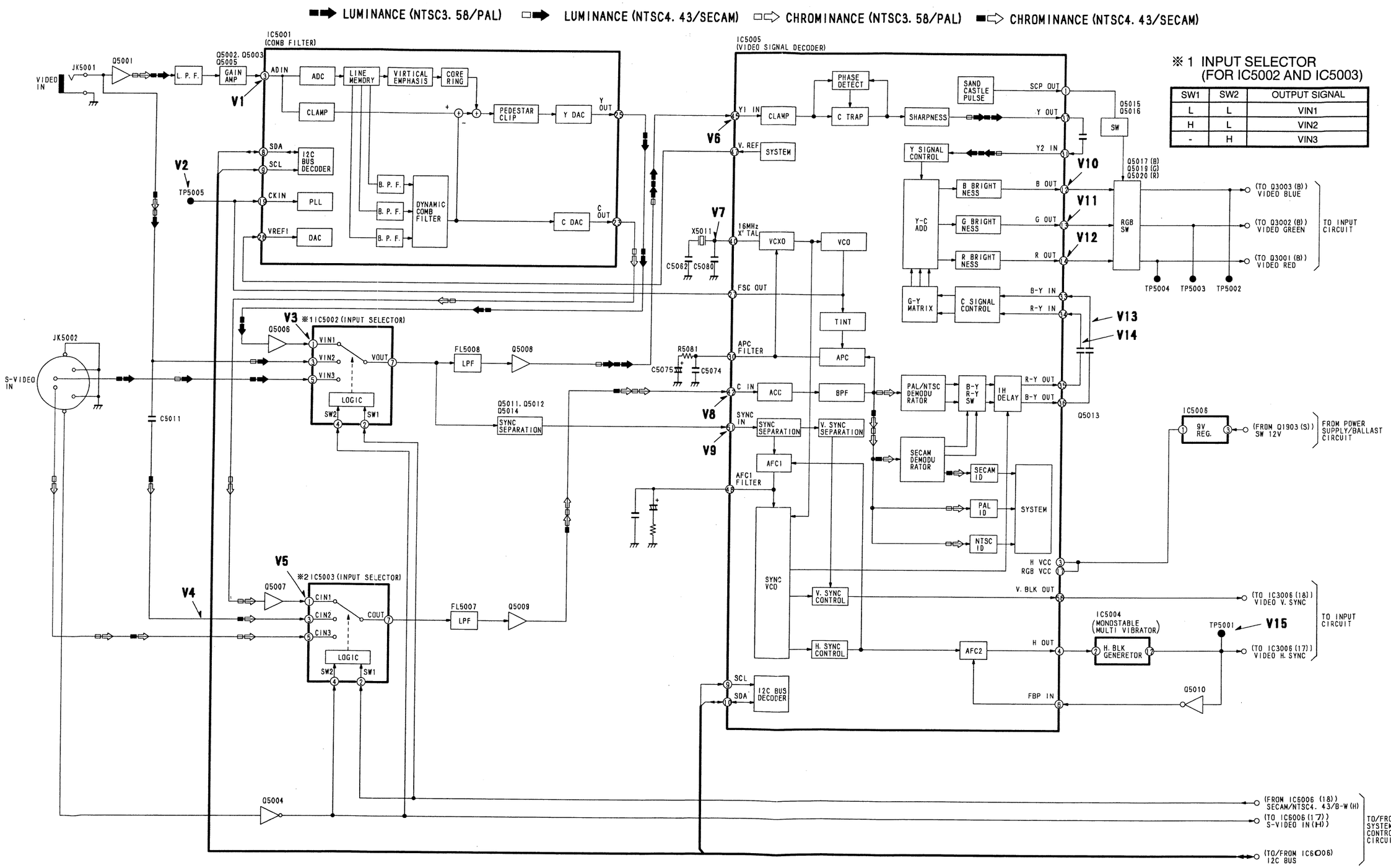
IN12 (RGB)



INPUT PROCESS BLOCK DIAGRAM



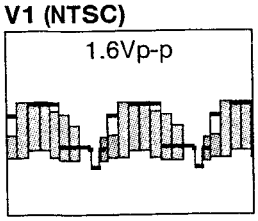
VIDEO PROCESS BLOCK DIAGRAM



WAVEFORM OF VIDEO PROCESS STAGE

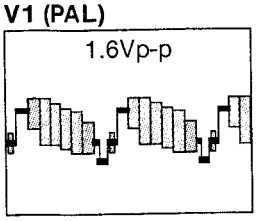
V1 (NTSC)

1.6Vp-p



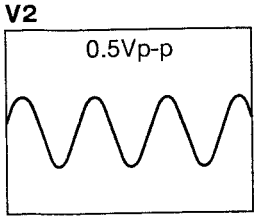
V1 (PAL)

1.6Vp-p



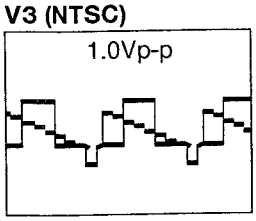
V2

0.5Vp-p



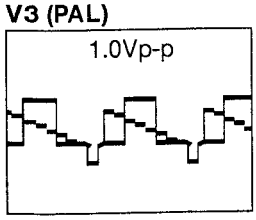
V3 (NTSC)

1.0Vp-p



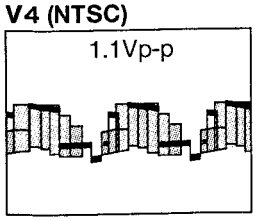
V3 (PAL)

1.0Vp-p



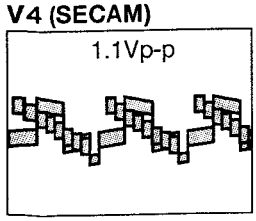
V4 (NTSC)

1.1Vp-p



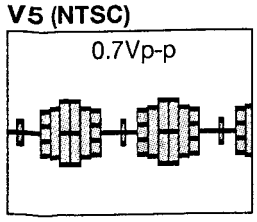
V4 (SECAM)

1.1Vp-p



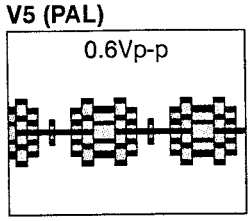
V5 (NTSC)

0.7Vp-p



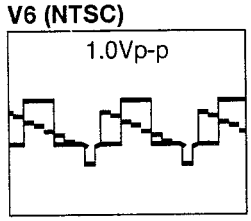
V5 (PAL)

0.6Vp-p



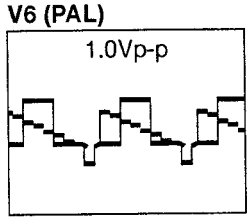
V6 (NTSC)

1.0Vp-p



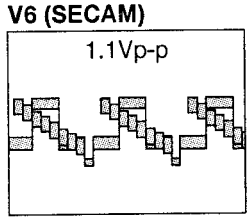
V6 (PAL)

1.0Vp-p



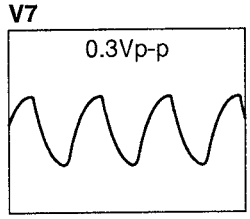
V6 (SECAM)

1.1Vp-p



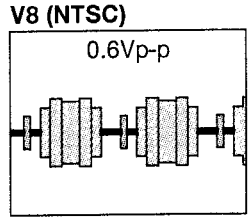
V7

0.3Vp-p



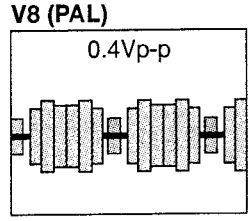
V8 (NTSC)

0.6Vp-p



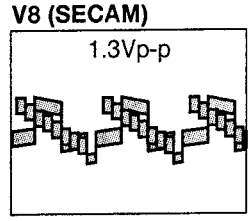
V8 (PAL)

0.4Vp-p



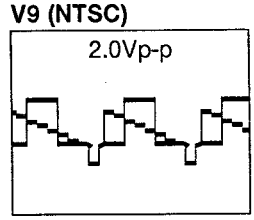
V8 (SECAM)

1.3Vp-p



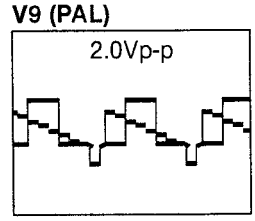
V9 (NTSC)

2.0Vp-p



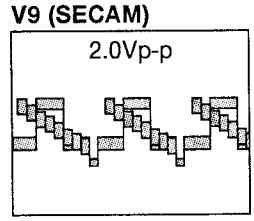
V9 (PAL)

2.0Vp-p



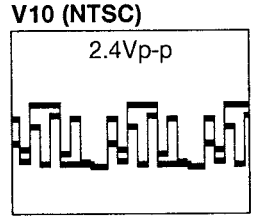
V9 (SECAM)

2.0Vp-p



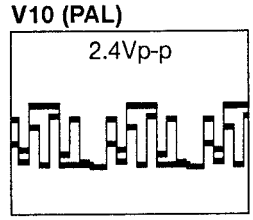
V10 (NTSC)

2.4Vp-p



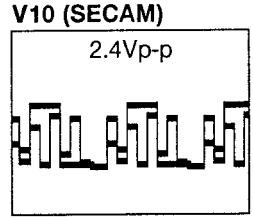
V10 (PAL)

2.4Vp-p



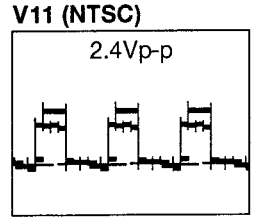
V10 (SECAM)

2.4Vp-p



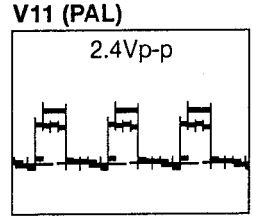
V11 (NTSC)

2.4Vp-p



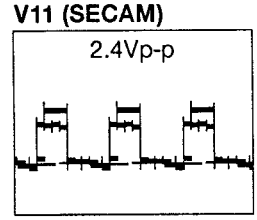
V11 (PAL)

2.4Vp-p



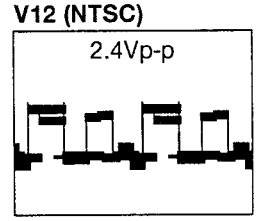
V11 (SECAM)

2.4Vp-p



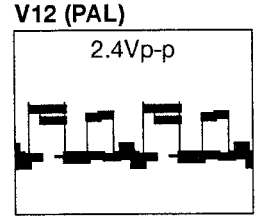
V12 (NTSC)

2.4Vp-p



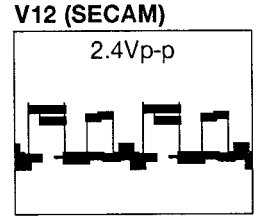
V12 (PAL)

2.4Vp-p



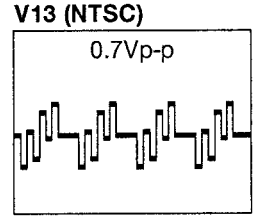
V12 (SECAM)

2.4Vp-p



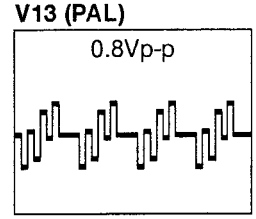
V13 (NTSC)

0.7Vp-p



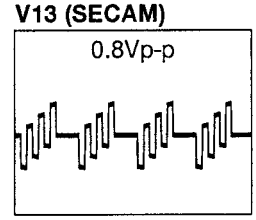
V13 (PAL)

0.8Vp-p



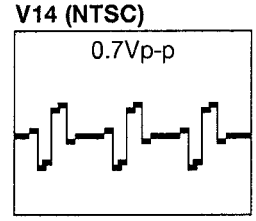
V13 (SECAM)

0.8Vp-p



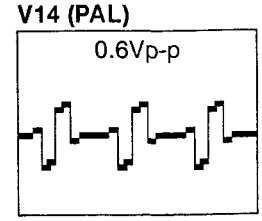
V14 (NTSC)

0.7Vp-p



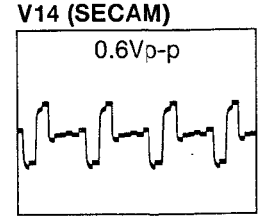
V14 (PAL)

0.6Vp-p



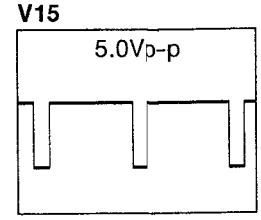
V14 (SECAM)

0.6Vp-p



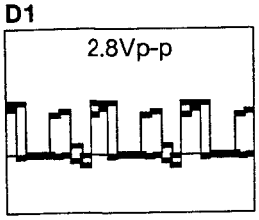
V15

5.0Vp-p

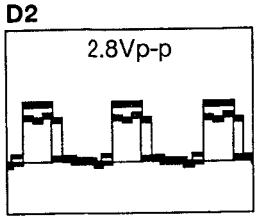


WAVEFORM OF DIGITAL PROCESS STAGE

D1



D2



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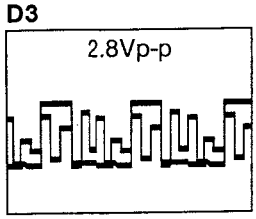

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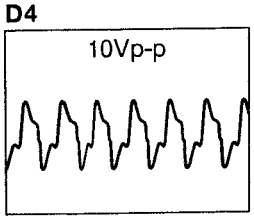

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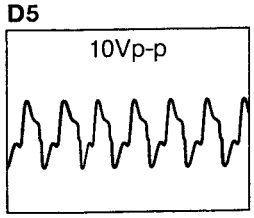

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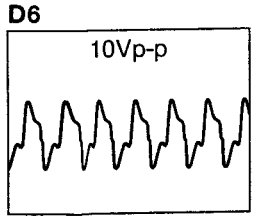

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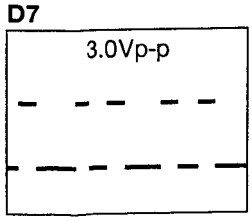

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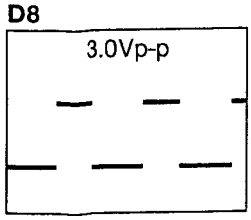

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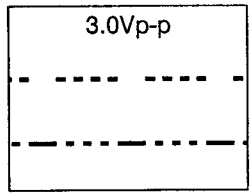

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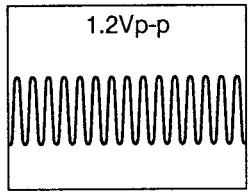

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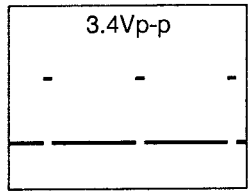

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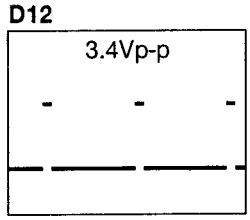

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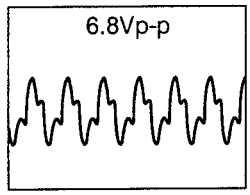
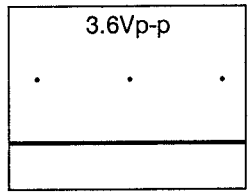


D14



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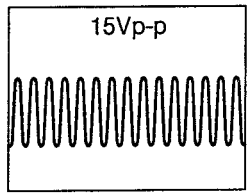

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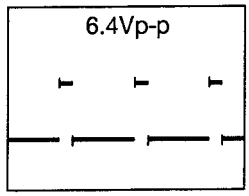

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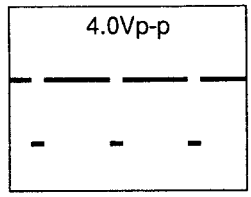

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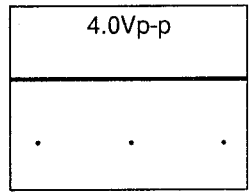

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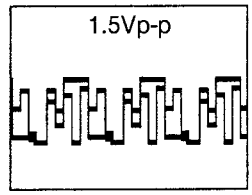

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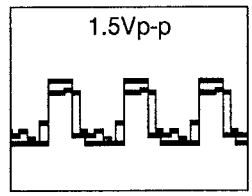

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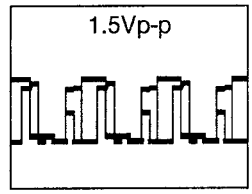

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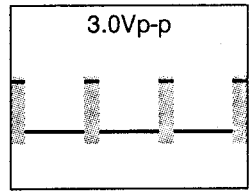

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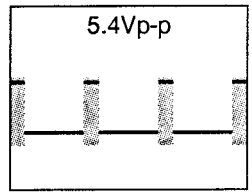

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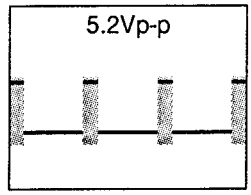

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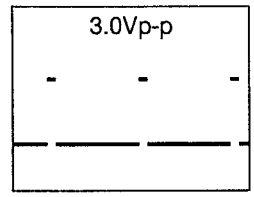

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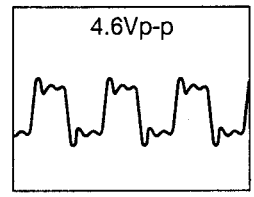

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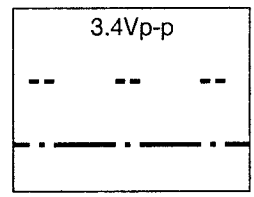


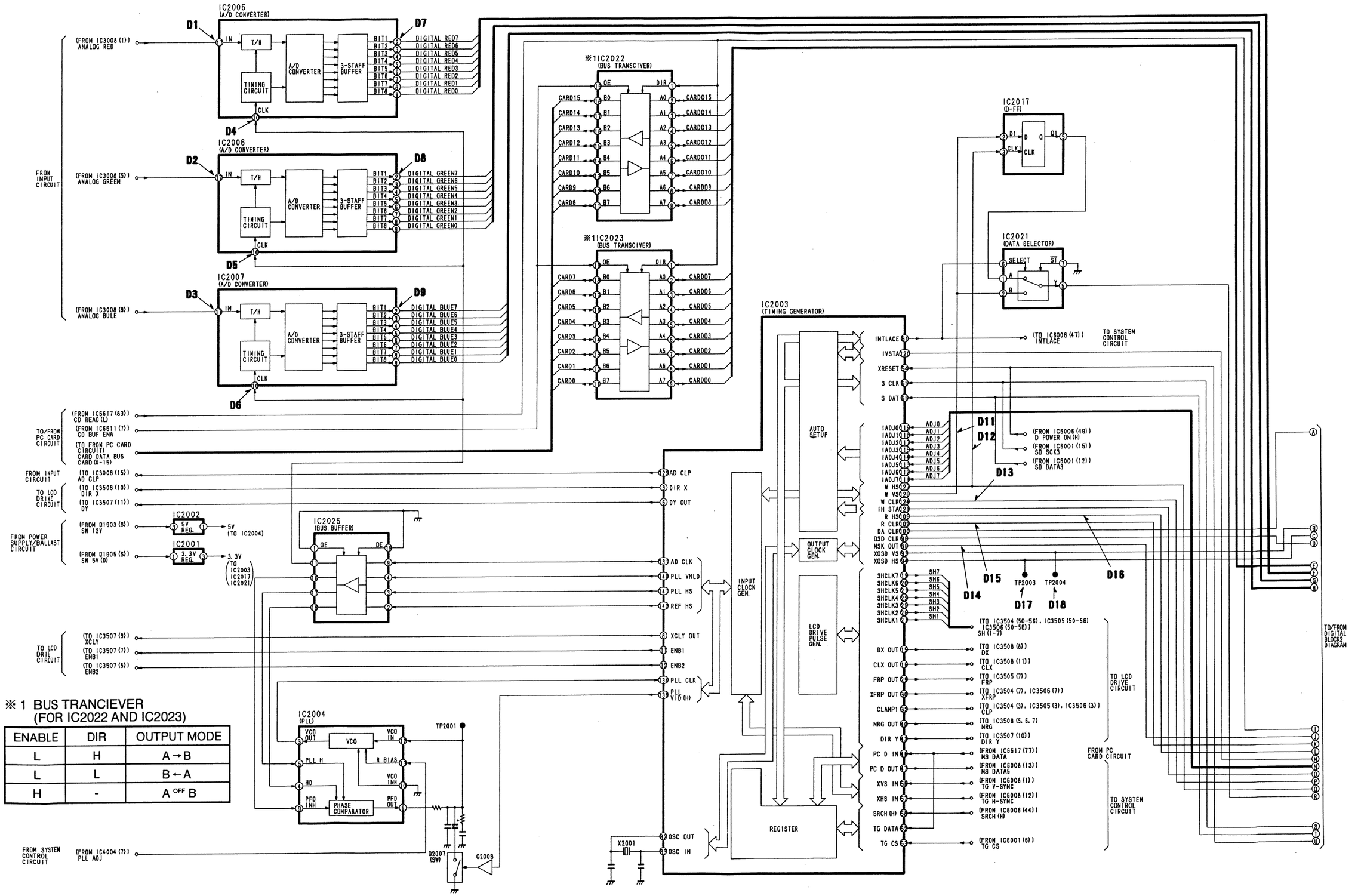
I/O CHART FOR TIMEING GENERATOR

IC2003 (uPD65945-031)

PIN NO.	PORT NAME	I/O	FUNCTION	PIN NO.	PORT NAME	I/O	FUNCTION
1	VDD	-	+3V	56	XVS IN	I	VIDEO V-Sync Signal Input
2	N. C.	-	(Not Used)	57	XHS IN	I	VIDEO H-Sync Signal Input
3	DIR X	O	X Direction Control	58	SRCH H	I	Auto Setup Control
4	XDIR X	O	(Not Used)	59	VDD	-	+3V
5	TMODE 1	I	(Not Used)	60	GND	-	Grounding Terminal
6	DY OUT	O	Y-Display Start Control	61	INTLACE	O	Interlace Distinction Output
7	CLY OUT	O	Y-Transmit Clock (Positive)	62	TG DATA	O	Serial Data Output
8	XCLY OUT	O	Y-Transmit Clock (Negative)	63	TG CS	I	Timing Generator Chip Select
9	TMODE2	I	(Not Used)	64	TST Q3	O	(Not Used)
10	GND	-	Grounding Terminal	65	S CLK	I	Serial Clock Output
11	ENB1	O	Clock Enable Pulse 1	66	S DAT	I	Serial Data Input
12	ENB2	O	Clock Enable Pulse 2	67	TST Q2	O	(Not Used)
13	VDD	-	+3V	68	REG2	O	(Not Used)
14	GND	-	Grounding Terminal	69	REG1	O	(Not Used)
15	DX OUT	O	X-Display Start Control	70	REG0	O	(Not Used)
16	CLX OUT	O	X-Transmit Clock (Positive)	71	GND	-	Grounding Terminal
17	XCLX OUT	O	X-Transmit Clock (Negative)	72	GND	-	Grounding Terminal
18	TMODE3	I	(Not Used)	73	VDD	-	+3V
19	SHCLK7	O	Sample Hold Clock 7	74	N. C.	-	(Not Used)
20	SHCLK6	O	Sample Hold Clock 6	75	H JIT	O	(Not Used)
21	SHCLK5	O	Sample Hold Clock 5	76	TST Q1	O	(Not Used)
22	SHCLK4	O	Sample Hold Clock 4	77	CLK MOD	I	Read Clock Setting
23	VDD	-	+3V	78	RCK IN	I	Read Ext. Clock Input
24	GND	-	Grounding Terminal	79	TMODE6	I	(Not Used)
25	SHCLK3	O	Sample Hold Clock 3	80	RCLK OUT	I	Read Clock Output
26	SHCLK2	O	Sample Hold Clock 2	81	GND	-	Grounding Terminal
27	SHCLK1	O	Sample Hold Clock 1	82	OSC OUT	O	Oscillator Output
28	TMODE4	I	(Not Used)	83	OSC IN	I	Oscillator Input
29	FRP OUT	O	VIDEO Signal Rev. Pulse (Positive)	84	GND	-	Grounding Terminal
30	XFRP OUT	O	VIDEO Signal Rev. Pulse (Negative)	85	VDD	-	+3V
31	TST Q7	O	(Not Used)	86	MSK OUT	O	VIDEO Mask SIgnal Output
32	CLAMP1	O	VIDEO Signal Clamp Pulse	87	XMS PRES	O	Memory Read Reset Output
33	CLAMP2	O	(Not Used)	88	XMS RE	O	Memory Read Enable Output
34	PRG OUT	O	(Not Used)	89	GND	-	Grounding Terminal
35	N. C.	-	(Not Used)	90	MS CLK	O	Memory Read Clock
36	VDD	-	+3V	91	GND	-	Grounding Terminal
37	GND	-	Grounding Terminal	92	TMODE7	I	(Not Used)
38	GND	-	Grounding Terminal	93	XOSD VS	O	OSD V-Sync Signal Output
39	VGATE	O	(Not Used)	94	XOSD HS	O	OSD H-Sync Signal Output
40	NRG OUT	O	NRG Control	95	GND	-	Grounding Terminal
41	GATEP	O	(Not Used)	96	OSD CLK	O	OSD Clock Output
42	TST Q6	O	(Not Used)	97	TMODE8	I	(Not Used)
43	DIR Y	O	Y Direction Control	98	VDD	-	+3V
44	N. C.	-	(Not Used)	99	GND	-	Grounding Terminal
45	TST Q5	O	(Not Used)	100	DA CLK	O	D/A Converter Clock
46	PC D IN	I	PC Data Exchange Input Buffer	101	GND	-	Grounding Terminal
47	PC D OUT	O	PC Data Exchange Ouput Buffer	102	R CLK	O	Read Reference Clock
48	N. C.	-	(Not Used)	103	GND	-	Grounding Terminal
49	VDD	-	+3V	104	TMODE9	I	(Not Used)
50	GND	-	Grounding Terminal	105	R VS	O	(Not Used)
51	N. C.	-	(Not Used)	106	R HS	O	Horizontal Read Reference Clock
52	TMODE5	I	(Not Used)	107	FRD	O	(Not Used)
53	N. C.	-	(Not Used)	108	VDD	-	+3V
54	XRESET	I	Reset	109	GND	-	Grounding Terminal
55	TST Q4	O	(Not Used)	110	GND	-	Grounding Terminal

PIN NO.	PORT NAME	I/O	FUNCTION	PIN NO.	PORT NAME	I/O	FUNCTION
111	IADJ7	I	VIDEO Digital Data Input 7	128	TMODE11	I	(Not Used)
112	IADJ6	I	VIDEO Digital Data Input 6	129	AD CLP	O	A/D Converter Clamp Output
113	IADJ5	I	VIDEO Digital Data Input 5	130	GND	-	Grounding Terminal
114	IADJ4	I	VIDEO Digital Data Input 4	131	AD CLK	O	A/D Converter Clock Output
115	IADJ3	I	VIDEO Digital Data Input 3	132	GND	-	Grounding Terminal
116	TMODE10	I	(Not Used)	133	VDD	-	+3V
117	IADJ2	I	VIDEO Digital Data Input 2	134	PLL CLK	I	PLL Clock Input
118	IADJ1	I	VIDEO Digital Data Input 1	135	TMODE12	I	(Not Used)
119	IADJ0	I	VIDEO Digital Data Input 0	136	PLLVID H	O	PLL Loop Filter Control
120	IVSTA	I	Vertical Write Start Control Input	137	PLLBS1	O	(Not Used)
121	IHSTA	I	Horizontal Write Start Control Input	138	PLLBS2	O	(Not Used)
122	VDD	-	+3V	139	TST Q0	O	(Not Used)
123	GND	-	Grounding Terminal	140	PLL VHLD	O	VCO Hold Control
124	W CLK	O	Write Reference Clock	141	PLL H	O	PLL Phase Comp. Signal Output
125	GND	-	Grounding Terminal	142	REF HS	O	Phase Comp. Reference Signal Output
126	W VS	O	Vertical Write Reference Clock	143	GND	-	Grounding Terminal
127	W HS	O	Horizontal Write Reference Clock	144	GND	-	Grounding Terminal

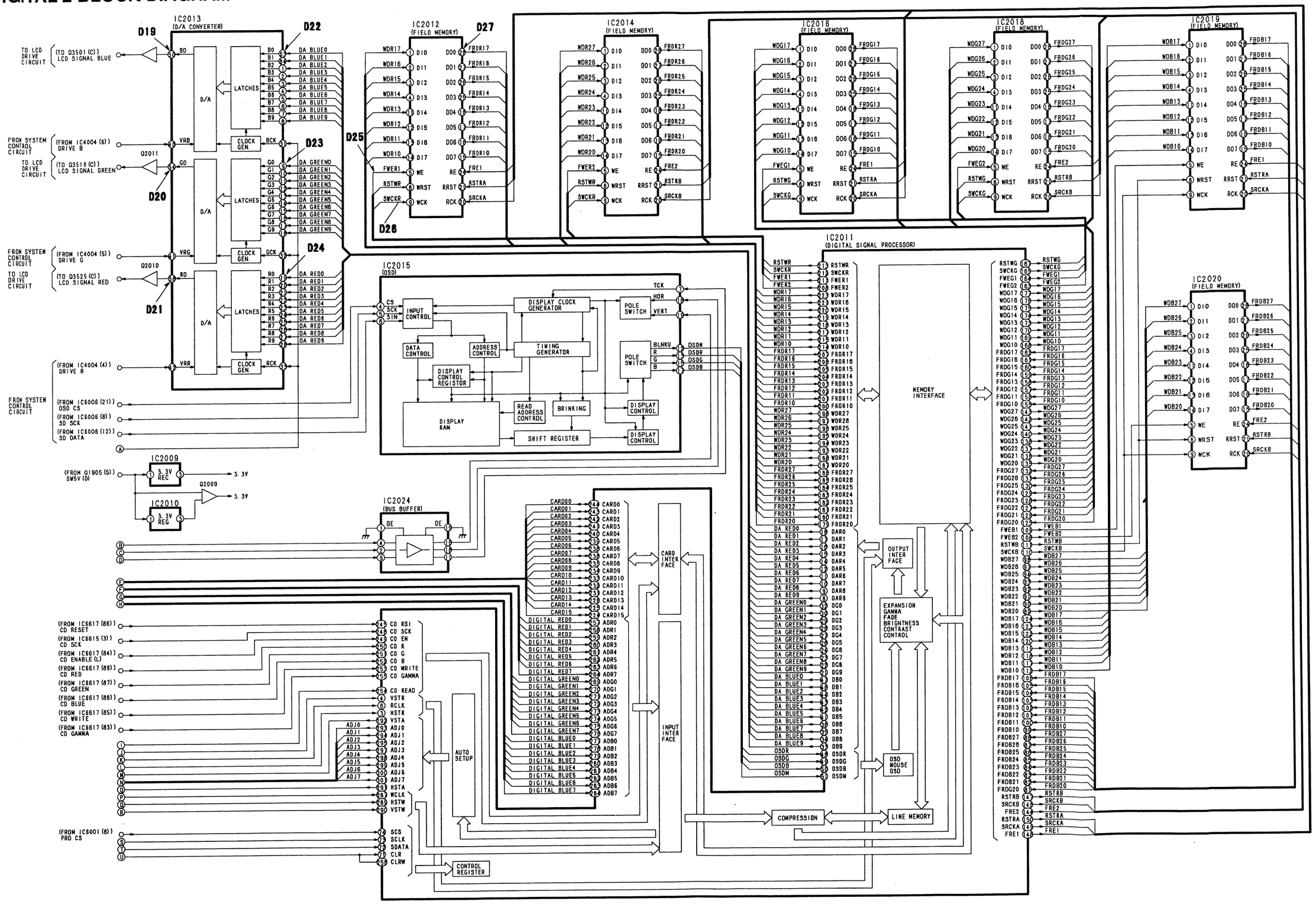
DIGITAL 1 BLOCK DIAGRAM



※ 1 BUS TRANCIEVER
(FOR IC2022 AND IC2023)

ENABLE	DIR	OUTPUT MODE
L	H	A→B
L	L	B←A
H	-	A OFF B

DIGITAL 2 BLOCK DIAGRAM



I/O CHART FOR DIGITAL SIGNAL PROCESSOR

IC2011 (uPD82335-001)

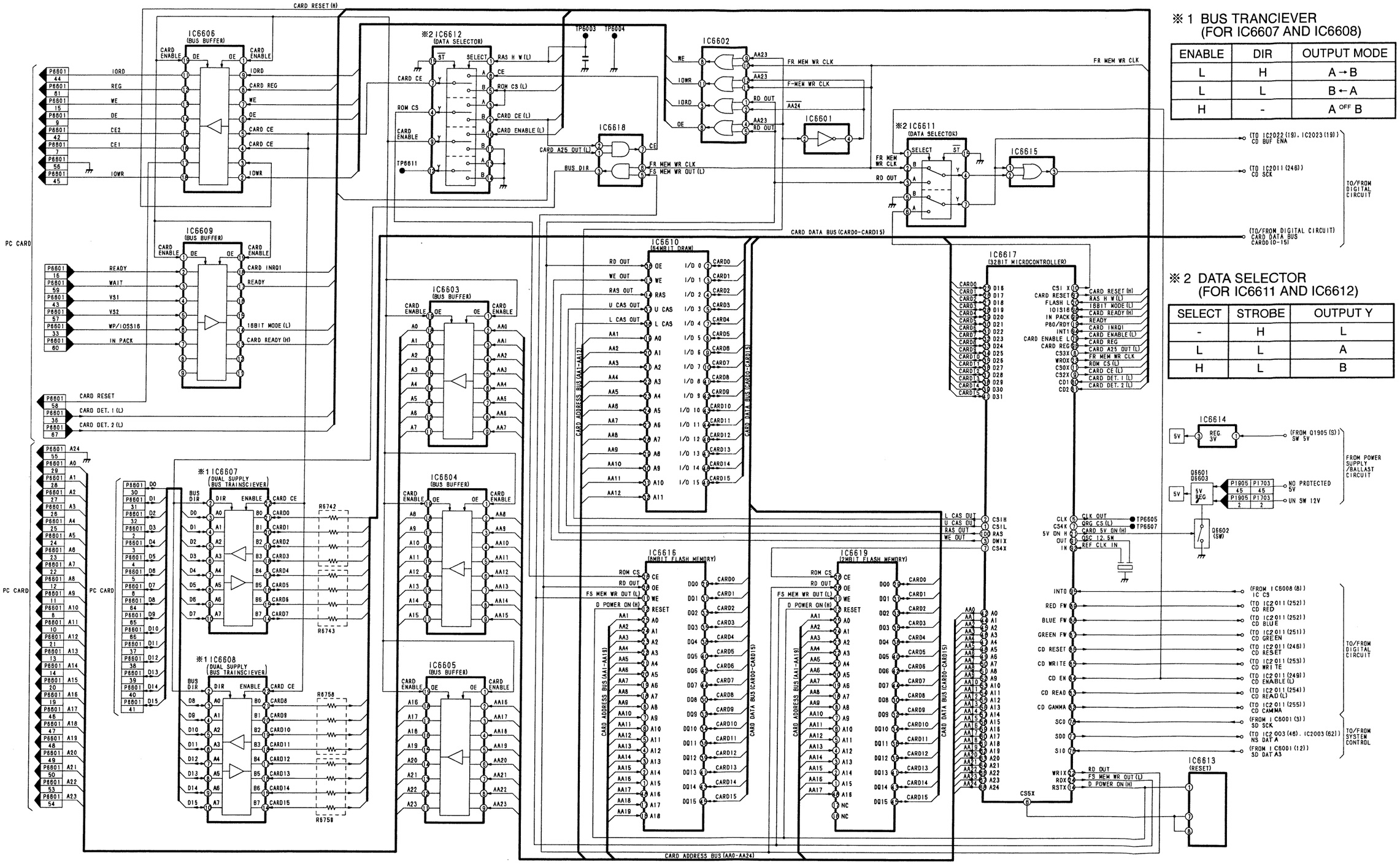
PIN NO.	PORT NAME	I/O	FUNCTION
1	GND	-	Grounding Terminal
2	GND	-	Grounding Terminal
3	HSTR	I	Read H-Start Pulse Input
4	VSTR	I	Read V-Start Pulse Input
5	GND	-	Grounding Terminal
6	RCLK	I	Read Dot Clock Signal Input
7	GND	-	Grounding Terminal
8	DAR9	O	R Digital Data Output 9
9	DAR8	O	R Digital Data Output 8
10	DAR7	O	R Digital Data Output 7
11	DAR6	O	R Digital Data Output 6
12	DAR5	O	R Digital Data Output 5
13	GND	-	Grounding Terminal
14	DAR4	O	R Digital Data Output 4
15	DAR3	O	R Digital Data Output 3
16	DAR2	O	R Digital Data Output 2
17	DAR1	O	R Digital Data Output 1
18	DAR0	O	R Digital Data Output 0
19	VDD	-	+3V
20	GND	-	Grounding Terminal
21	DAG9	O	G Digital Data Output 9
22	DAG8	O	G Digital Data Output 8
23	DAG7	O	G Digital Data Output 7
24	DAG6	O	G Digital Data Output 6
25	GND	-	Grounding Terminal
26	DAG5	O	G Digital Data Output 5
27	DAG4	O	G Digital Data Output 4
28	DAG3	O	G Digital Data Output 3
29	DAG2	O	G Digital Data Output 2
30	DAG1	O	G Digital Data Output 1
31	GND	-	Grounding Terminal
32	DAG0	O	G Digital Data Output 0
33	DAB9	O	B Digital Data Output 9
34	DAB8	O	B Digital Data Output 8
35	DAB7	O	B Digital Data Output 7
36	DAB6	O	B Digital Data Output 6
37	VDD	-	+3V
38	VDD	-	+3V
39	GND	-	Grounding Terminal
40	GND	-	Grounding Terminal
41	DAB5	O	B Digital Data Output 5
42	DAB4	O	B Digital Data Output 4
43	DAB3	O	B Digital Data Output 3
44	DAB2	O	B Digital Data Output 2
45	GND	-	Grounding Terminal
46	DAB1	O	B Digital Data Output 1
47	DAB0	O	B Digital Data Output 0
48	OSDR	I	OSD R Signal Input
49	OSDG	I	OSD G Signal Input
50	OSDB	I	OSD B Signal Input
51	OSDM	I	OSD Mask Signal Input
52	MOSDR0	I	(Not Used)
53	MOSDR1	I	(Not Used)
54	MOSDG0	I	(Not Used)
55	MOSDG1	I	(Not Used)
56	MOSDB0	I	(Not Used)
57	VDD	-	+3V
58	GND	-	Grounding Terminal
59	MOSDB1	I	(Not Used)
60	MOSDM0	I	(Not Used)
61	MOSDM1	I	(Not Used)
62	MSRCK	I	(Not Used)
63	FI EXT	I	(Not Used)
64	FADE EXT	I	(Not Used)
65	TEB	I	(Not Used)
66	TIN	I	(Not Used)
67	TEST	I	(Not Used)
68	TST FAEN	I	(Not Used)
69	TEST F	I	(Not Used)
70	TEST CD	I	(Not Used)
71	CLR	I	Read Reset: LOW
72	SDATA	I	Serial Data Signal
73	SCLK	I	Serial Clock Signal
74	SCS	I	Serial Chip Select Signal
75	GND	-	Grounding Terminal
76	GND	-	Grounding Terminal
77	VDD	-	+3V
78	VDD	-	+3V
79	T	-	(Not Used)
80	TST FVE	-	(Not Used)
81	FRDB20	I	B Field Memory 2 Data Input 20
82	FRDB21	I	B Field Memory 2 Data Input 21
83	FRDB22	I	B Field Memory 2 Data Input 22
84	FRDB23	I	B Field Memory 2 Data Input 23
85	FRDB24	I	B Field Memory 2 Data Input 24
86	FRDB25	I	B Field Memory 2 Data Input 25
87	FRDB26	I	B Field Memory 2 Data Input 26
88	FRDB27	I	B Field Memory 2 Data Input 27
89	WDB20	O	B Field Memory 2 Data Output 20
90	WDB21	O	B Field Memory 2 Data Output 21
91	WDB22	O	B Field Memory 2 Data Output 22
92	WDB23	O	B Field Memory 2 Data Output 23
93	WDB24	O	B Field Memory 2 Data Output 24
94	WDB25	O	B Field Memory 2 Data Output 25
95	GND	-	Grounding Terminal
96	GND	-	Grounding Terminal
97	WDB26	O	B Field Memory 2 Data Output 26
98	WDB27	O	B Field Memory 2 Data Output 27
99	FRDB10	I	B Field Memory 1 Data Input 10
100	FRDB11	I	B Field Memory 1 Data Input 11
101	FRDB12	I	B Field Memory 1 Data Input 12
102	FRDB13	I	B Field Memory 1 Data Input 13
103	FRDB14	I	B Field Memory 1 Data Input 14
104	FRDB15	I	B Field Memory 1 Data Input 15
105	FRDB16	I	B Field Memory 1 Data Input 16
106	FRDB17	I	B Field Memory 1 Data Input 17
107	GND	-	Grounding Termnal
108	FWEB2	O	B Field Memory 2 Write Enable: LOW
109	FWEB1	O	B Field Memory 1 Write Enable: LOW
110	SWCKB	O	B Field Memory Write Clock Signal
111	RSTWB	O	B Field Memory Write Address Reset Signal: LOW
112	WDB10	O	B Field Memory 1 Data Output 10
113	VDD	-	+3V
114	VDD	-	+3V
115	GND	-	Grounding Terminal
116	GND	-	Grounding Terminal
117	WDB11	O	B Field Memory 1 Data Output 11
118	WDB12	O	B Field Memory 1 Data Output 12
119	WDB13	O	B Field Memory 1 Data Output 13
120	WDB14	O	B Field Memory 1 Data Output 14
121	GND	-	Grounding Terminal
122	WDB15	O	B Field Memory 1 Data Output 15
123	WDB16	O	B Field Memory 1 Data Output 16
124	WDB17	O	B Field Memory 1 Data Output 17
125	FRDG20	I	G Field Memory 2 Data Input 20
126	FRDG21	I	G Field Memory 2 Data Input 21
127	FRDG22	I	G Field Memory 2 Data Input 22
128	FRDG23	I	G Field Memory 2 Data Input 23
129	FRDG24	I	G Field Memory 2 Data Input 24
130	FRDG25	I	G Field Memory 2 Data Input 25
131	FRDG26	I	G Field Memory 2 Data Input 26
132	FRDG27	I	G Field Memory 2 Data Input 27
133	GND	-	Grounding Terminal
134	GND	-	Grounding Terminal
135	WDG20	O	G Field Memory 2 Data Output 20
136	WDG21	O	G Field Memory 2 Data Output 21
137	WDG22	O	G Field Memory 2 Data Output 22
138	WDG23	O	G Field Memory 2 Data Output 23
139	GND	-	Grounding Terminal
140	WDG24	O	G Field Memory 2 Data Output 24
141	WDG25	O	G Field Memory 2 Data Output 25
142	WDG26	O	G Field Memory 2 Data Output 26
143	WDG27	O	G Field Memory 2 Data Output 27
144	FRE2	O	Field Memory 2 Read Enable: LOW
145	GND	-	Grounding Terminal
146	SRCKB	O	Field Memory 2 Read Clock Signal
147	RSTRB	O	Field Memory 2 Read Address Reset Signal: LOW
148	FRE1	O	Field Memory 1 Read Enable: LOW
149	SRCKA	O	Field Memory 1 Read Clock Signal
150	RSTRA	O	Field Memory 1 Read Address Reset Signal: LOW
151	VDD	-	+3V
152	VDD	-	+3V
153	GND	-	Grounding Terminal
154	GND	-	Grounding Terminal
155	FRDG10	I	G Field Memory 1 Data Input 10
156	FRDG11	I	G Field Memory 1 Data Input 11
157	FRDG12	I	G Field Memory 1 Data Input 12
158	FRDG13	I	G Field Memory 1 Data Input 13
159	FRDG14	I	G Field Memory 1 Data Input 14
160	FRDG15	I	G Field Memory 1 Data Input 15
161	FRDG16	I	G Field Memory 1 Data Input 16
162	FRDG17	I	G Field Memory 1 Data Input 17
163	FWEG2	O	G Field Memory 2 Write Enable: LOW
164	FWEG1	O	G Field Memory 1 Write Enable: LOW
165	SWCKG	O	G Field Memory Write Clock Signal
166	GND	-	Grounding Terminal
167	RSTWG	O	G Field Memory Write Address Reset signal: LOW
168	WDG10	O	G Field Memory 1 Data Output 10
169	WDG11	O	G Field Memory 1 Data Output 11
170	WDG12	O	G Field Memory 1 Data Output 12
171	VDD	-	+3V
172	GND	-	Grounding Terminal
173	WDG13	O	G Field Memory 1 Data Output 13
174	WDG14	O	G Field Memory 1 Data Output 14
175	WDG15	O	G Field Memory 1 Data Output 15
176	WDG16	O	G Field Memory 1 Data Output 16
177	WDG17	O	G Field Memory 1 Data Output 17
178	GND	-	Grounding Terminal
179	FRDR20	I	R Field Memory 2 Data Input 20
180	FRDR21	I	R Field Memory 2 Data Input 21
181	FRDR22	I	R Field Memory 2 Data Input 22
182	FRDR23	I	R Field Memory 2 Data Input 23
183	FRDR24	I	R Field Memory 2 Data Input 24
184	FRDR25	I	R Field Memory 2 Data Input 25
185	FRDR26	I	R Field Memory 2 Data Input 26
186	FRDR27	I	R Field Memory 2 Data Input 27
187	WDR20	O	R Field Memory 2 Data Output 20
188	WDR21	O	R Field Memory 2 Data Output 21
189	VDD	-	+3V
190	VDD	-	+3V
191	GND	-	Grounding Terminal
192	GND	-	Grounding Terminal
193	WDR22	O	R Field Memory 2 Data Output 22
194	WDR23	O	R Field Memory 2 Data Output 23
195	WDR24	O	R Field Memory 2 Data Output 24
196	WDR25	O	R Field Memory 2 Data Output 25
197	WDR26	O	R Field Memory 2 Data Output 26
198	WDR27	O	R Field Memory 2 Data Output 27
199	GND	-	Grounding Terminal
200	FRDR10	I	R Field Memory 1 Data Input 10
201	FRDR11	I	R Field Memory 1 Data Input 11
202	FRDR12	I	R Field Memory 1 Data Input 12
203	FRDR13	I	R Field Memory 1 Data Input 13
204	FRDR14	I	R Field Memory 1 Data Input 14
205	FRDR15	I	R Field Memory 1 Data Input 15
206	FRDR16	I	R Field Memory 1 Data Input 16
207	FRDR17	I	R Field Memory 1 Data Input 17
208	FWER2	O	R Field Memory 2 Write Enable: LOW
209	VDD	-	+3V
210	GND	-	Grounding Terminal
211	FWER1	O	R Field Memory 1 Write Enable: LOW
212	SWCKR	O	R Field Memory Write Clock Signal
213	RSTWR	O	R Field Memory Write Address Reset Signal: LOW
214	WDR10	O	R Field Memory 1 Data Output 10
215	WDR11	O	R Field Memory 1 Data Output 11

PIN NO.	PORT NAME	I/O	FUNCTION	PIN NO.	PORT NAME	I/O	FUNCTION
216	GND	-	Grounding Terminal	261	ADR4	I	R Digital Data Input 4
217	WDR12	O	R Field Memory 1 Data Output 12	262	ADR5	I	R Digital Data Input 5
218	WDR13	O	R Field Memory 1 Data Output 13	263	ADR6	I	R Digital Data Input 6
219	WDR14	O	R Field Memory 1 Data Output 14	264	ADR7	I	R Digital Data Input 7
220	WDR15	O	R Field Memory 1 Data Output 15	265	VDD	-	+3V
221	WDR16	O	R Field Memory 1 Data Output 16	266	VDD	-	+3V
222	GND	-	Grounding Terminal	267	GND	-	Grounding Terminal
223	WDR17	O	R Field Memory 1 Data Output 17	268	GND	-	Grounding Terminal
224	CARD15	I/O	Card Data Input/Output 15	269	ADG0	I	G Digital Data Input 0
225	CARD14	I/O	Card Data Input/Output 14	270	ADG1	I	G Digital Data Input 1
226	CARD13	I/O	Card Data Input/Output 13	271	ADG2	I	G Digital Data Input 2
227	GND	-	Grounding Terminal	272	ADG3	I	G Digital Data Input 3
228	GND	-	Grounding Terminal	273	ADG4	I	G Digital Data Input 4
229	VDD	-	+3V	274	ADG5	I	G Digital Data Input 5
230	VDD	-	+3V	275	ADG6	I	G Digital Data Input 6
231	CARD12	I/O	Card Data Input/Output 12	276	ADG7	I	G Digital Data Input 7
232	CARD11	I/O	Card Data Input/Output 11	277	ADB0	I	B Digital Data Input 0
233	CARD10	I/O	Card Data Input/Output 10	278	ADB1	I	B Digital Data Input 1
234	CARD9	I/O	Card Data Input/Output 9	279	ADB2	I	B Digital Data Input 2
235	CARD8	I/O	Card Data Input/Output 8	280	ADB3	I	B Digital Data Input 3
236	CARD7	I/O	Card Data Input/Output 7	281	ADB4	I	B Digital Data Input 4
237	GND	-	Grounding Terminal	282	ADB5	I	B Digital Data Input 5
238	CARD6	I/O	Card Data Input/Output 6	283	ADB6	I	B Digital Data Input 6
239	CARD5	I/O	Card Data Input/Output 5	284	ADB7	I	B Digital Data Input 7
240	CARD4	I/O	Card Data Input/Output 4	285	GND	-	Grounding Terminal
241	CARD3	I/O	Card Data Input/Output 3	286	GND	-	Grounding Terminal
242	CARD2	I/O	Card Data Input/Output 2	287	WCLK	I	Write Dot Clock Signal Input
243	CARD1	I/O	Card Data Input/Output 1	288	GND	-	Grounding Terminal
244	CARD0	I/O	Card Data Input/Output 0	289	HSTW	I	Write H-Start Pulse Input
245	CD RST	I	Field Memory Address Reset	290	VSTW	I	Write V-Start Pulse Input
246	CD SCK	I	Field Memory R/W Clock Signal	291	HSTA	O	Auto Setup H-Start Pulse Output
247	GND	-	Grounding Terminal	292	VSTA	O	Auto Setup V-Start Pulse Output
248	GND	-	Grounding Terminal	293	ADJ0	O	Auto Setup Data 0
249	CD EN	I	Field Memory R/W Enable	294	ADJ1	O	Auto Setup Data 1
250	CD R	I	R Field Memory Select	295	ADJ2	O	Auto Setup Data 2
251	CD G	I	G Field Memory Select	296	GND	-	Grounding Terminal
252	CD B	I	B Field Mmory Select	297	ADJ3	O	Auto Setup Data 3
253	CD WRIT	I	Field Memory Write Select	298	ADJ4	O	Auto Setup Data 4
254	CD READ	I	Field Memory Read Select	299	ADJ5	O	Auto Setup Data 5
255	CD GAMMA	I	Gamma Table Write Select	300	ADJ6	O	Auto Setup Data 6
256	CLR W	I	Write Reset: LOW	301	ADJ7	O	Auto Setup Data 7
257	ADR0	I	R Digital Data Input 0	302	FR D	I	(Not Used)
258	ADR1	I	R Digital Data Input 1	303	VDD	-	+3V
259	ADR2	I	R Digital Data Input 2	304	VDD	-	+3V
260	ADR3	I	R Digital Data Input 3				

I/O CHART FOR 32BIT RISC MICROCONTROLLER IC6617 (MB91101)

PIN NO.	PORT NAME	I/O	FUNCTION	PIN NO.	PORT NAME	I/O	FUNCTION
1	CSIL	O	UCAS Signal Output	50	A7	O	Address Output 7
2	CSIH	O	LCAS Signal Output	51	A8	O	Address Output 8
3	DW1X	O	WE Signal Output: LOW	52	A9	O	Address Output 9
4	VCC	-	+3V	53	A10	O	Address Output 10
5	CLK	O	Ext. Clock Output	54	A11	O	Address Output 11
6	CS5X	O	(Not Used)	55	A12	O	Address Output 12
7	CS4X	O	ORG Capture Flash Memory Chip Select: LOW	56	A13	O	Address Output 13
				57	A14	O	Address Output 14
8	CS3X	O	Card-A25 Output: LOW	58	A15	O	Address Output 15
9	CS2X	O	Card-CE1/Card-CE2 Output: LOW	59	A16	O	Address Output 16
10	CS1X	O	(Not Used)	60	A17	O	Address Output 17
11	CS0X	O	Rom Chip Select: LOW	61	A18	O	Address Output 18
12	NMIX	I	+3V	62	A19	O	Address Output 19
13	HSTX	I	+3V	63	A20	O	Address Output 20
14	RSTX	I	IC6617 Reset: LOW	64	A21	O	Address Output 21
15	VSS	-	Grounding Terminal	65	VSS	-	Grounding Terminal
16	MD0	I	+3V	66	A22	O	Address Output 22
17	MD1	I	Grounding Terminal	67	A23	O	Address Output 23
18	MD2	I	Grounding Terminal	68	A24	O	Address Output 24
19	P80/RDY	I	P80/RDY Signal Input	69	AVCC	-	+3V
20	FLASH L	I	Flash Memory Write Mode: LOW	70	AVRH	-	+3V
21	5V ON H	O	PC Card 5V ON: HIGH	71	AVSS/AVRL	-	Grounding Terminal
22	RDX	O	RD Signal Output	72	AN0	-	(Not Used)
23	WR0X	O	Frame Memory Write Clock Signal Output	73	AN1	-	(Not Used)
				74	AN2	-	(Not Used)
24	WR1X	O	Flash Memory Write Signal Output: HIGH	75	AN3	-	(Not Used)
				76	SI0	I	Serial Data Input
25	D16	I/O	Data Input/Output 16	77	SO0	O	Serial Data Output
26	D17	I/O	Data Input/Output 17	78	SC0	I	Serial Clock Input
27	D18	I/O	Data Input/Output 18	79	CARD ENABLE	O	Card Enable: LOW
28	D19	I/O	Data Input/Output 19	80	CD1	I	Card Detect Input: LOW
29	D20	I/O	Data Input/Output 20	81	CD2	I	Card Detect Input: LOW
30	D21	I/O	Data Input/Output 21	82	CD GAMMA	O	Gamma Table Write: LOW
31	D22	I/O	Data Input/Output 22	83	CD READ	O	Frame Memory Read: LOW
32	D23	I/O	Data Input/Output 23	84	CD EN	O	Frame Memory Control: LOW
33	D24	I/O	Data Input/Output 24	85	CD WRITE	O	Frame Memory Write: HIGH
34	D25	I/O	Data Input/Output 25	86	CD RESET	O	Frame Memory Reset Pulse Output
35	D26	I/O	Data Input/Output 26	87	GREEN FW	O	Frame Memory Green Control: LOW
36	D27	I/O	Data Input/Output 27	88	BLUE FW	O	Frame Memory Blue Control: LOW
37	D28	I/O	Data Input/Output 28	89	RED FW	O	Frame Memory Red Control: LOW
38	D29	I/O	Data Input/Output 29	90	VSS	-	Grounding Terminal
39	D30	I/O	Data Input/Output 30	91	OUT	O	Oscillator 12.5MHz
40	VSS	-	Grounding Terminal	92	IN	I	Reference Clock IC6617
41	D31	I/O	Data Input/Output 31	93	VSS	-	Grounding Terminal
42	A0	O	Address Output 0	94	INT1	I	Card Interrupt Signal Input
43	VCC	-	+3V	95	INT0	I	IC6617 Chip Select Input: LOW
44	A1	O	Address Output 1	96	CARD REG	O	Card Reg Signal Output
45	A2	O	Address Output 2	97	CARD RESET	O	Card Reset Pulse Output: HIGH
46	A3	O	Address Output 3	98	IOIS16	I	16bit Mode Input: LOW
47	A4	O	Address Output 4	99	INPACK	I	Card Ready: HIGH
48	A5	O	Address Output 5	100	RAS	O	RAS Signal Output
49	A6	O	Address Output 6				

PC CARD PROCESS BLOCK DIAGRAM



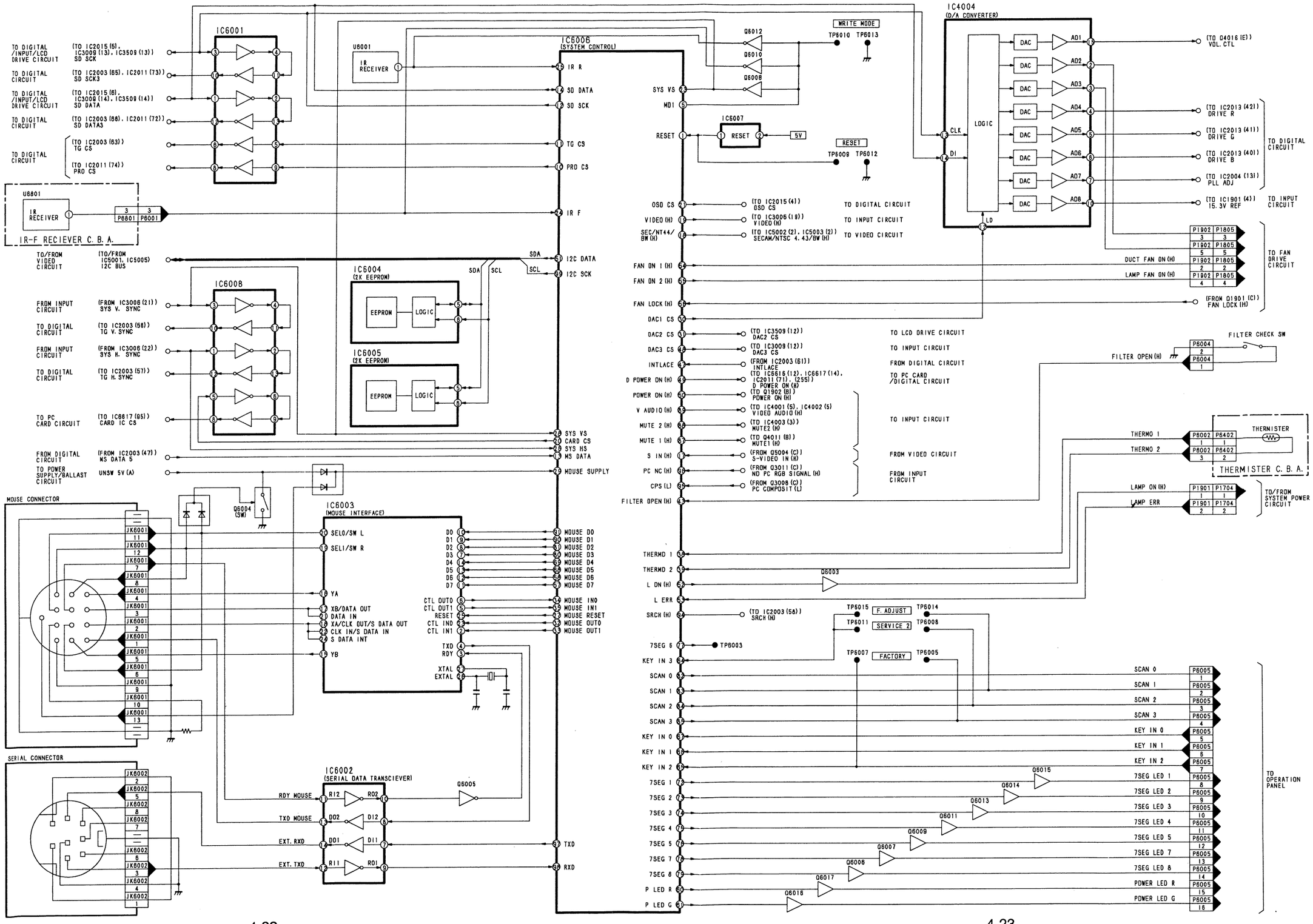
※1 BUS TRANCIEVER (FOR IC6607 AND IC6608)

ENABLE	DIR	OUTPUT MODE
L	H	A → B
L	L	B ← A
H	-	A OFF B

※2 DATA SELECTOR (FOR IC6611 AND IC6612)

SELECT	STROBE	OUTPUT Y
-	H	L
L	L	A
H	L	B

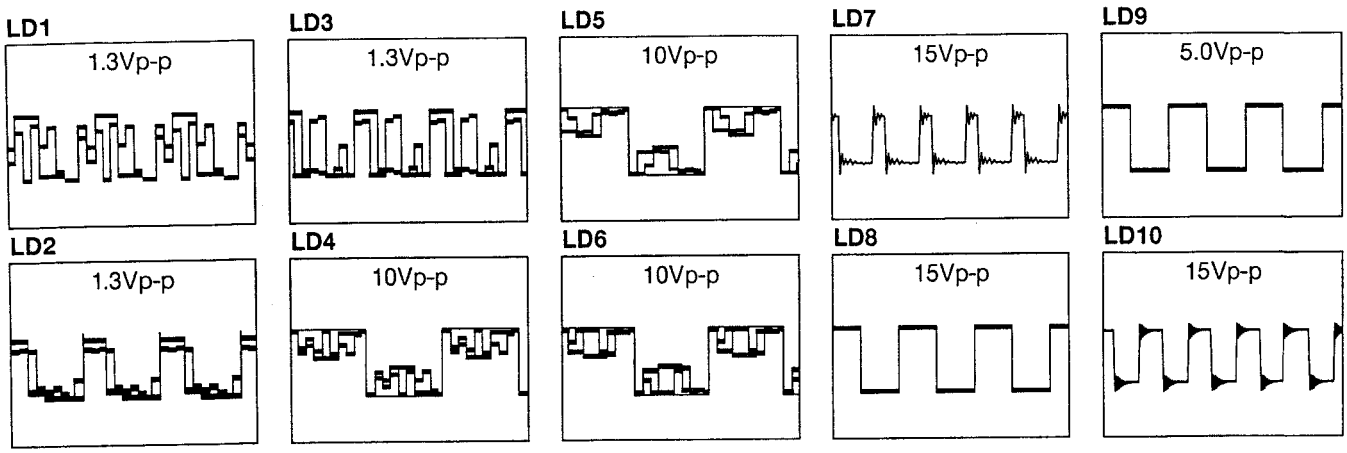
SYSTEM CONTROL PROCESS BLOCK DIAGRAM



I/O CHART FOR SYSTEM MICROPROSESSOR
IC6006 (HD64F2148F20)

PIN NO.	PORT NAME	I/O	FUNCTION	PIN NO.	PORT NAME	I/O	FUNCTION
1	RESET	I	IC6006 Reset: LOW	51	I2C DATA	I/O	I²C Serial Data Input/Output
2	XTAL	I	Refrence Clock for IC6006	52	L ON H	O	Lamp ON: HIGH
3	EXTAL	I	Refrence Clock for IC6006	53	L ERR	I	Lamp Error Input
4	VCCB	-	+5V	54	FAN1 ON H	O	FAN1 ON: HIGH
5	MD1	I	+5V	55	FAN2 ON H	O	FAN2 ON: HIGH
6	MD0	I	Grounding Terminal	56	FAN LOCK H	I	Cooling Fan Lock: HIGH
7	NMI	I	+5V	57	MOUSE D7	O	Mouse Data Output 7
8	STBY	I	+5V	58	MOUSE D6	O	Mouse Data Output 6
9	VCC	-	+5V	59	VCC	-	+5V
10	PRO CS	O	Process Chip Select: HIGH	60	P LED R	O	Power LED-R ON: LOW
11	TG CS	O	Timing Generator Chip Select: LOW	61	P LED G	O	Power LED-G ON: LOW
12	SD SCK	O	Serial Clock Output	62	KEY IN5	I	Key Data IN 5 Input
13	MS DATA	I	Serial Data Input	63	KEY IN4	I	Key Data IN 4 Input
14	SD DATA	O	Serial Data Output	64	KEY IN3	I	Key Data IN 3 Input
15	VSS	-	Grounding Terminal	65	KEY IN2	I	Key Data IN 2 Input
16	COMB RESET	O	Comb Filter Reset: LOW	66	KEY IN1	I	Key Data IN 1 Input
17	S IN H	I	S-VIDEO Signal Input: HIGH	67	KEY IN0	I	Key Data IN 0 Input
18	SEC/NT44/BW H	O	SECAM/NTSC 4.43/BW: HIGH	68	MOUSE D5	O	Mouse Data Output 5
19	VIDEO H	O	VIDEO/S-VIDEO Mode: HIGH	69	MOUSE D4	O	Mouse Data Output 4
20	CARD CS	O	CARD Chip Select: LOW	70	VSS	-	Grounding Terminal
21	OSD CS	O	OSD Chip Select: LOW	71	VSS	-	Grounding Terminal
22	NT36/NT44 L	O	NTSC 3.58/NTSC 4.43: LOW	72	7SEG 1	O	7 Segment LED-a ON: LOW
23	SYS VS	I	V-Sync Interrupt Input	73	7SEG 2	O	7 Segment LED-f ON: LOW
24	IR F	I	Front IR Remote Control Data Interrupt Input	74	7SEG 3	O	7 Segment LED-g ON: LOW
				75	7SEG 4	O	7 Segment LED-e ON: LOW
25	IR R	I	Rear IR Remote Control Data Interrupt Input	76	7SEG 5	O	7 Segment LED-d ON: LOW
				77	7SEG 6	O	(Not Used)
26	SYS HS	I	VIDEO H-Sync Signal Input	78	7SEG 7	O	7 Segment LED-c ON: LOW
27	MOUSE RESET	O	Mouse Reset: LOW	79	7SEG 8	O	7 Segment LED-b ON: LOW
28	SYS VS	I	VIDEO V-Sync Signal Input	80	MOUSE D3	O	Mouse Data Output 3
29	MOUSE SUPPLY	I	Mouse Supply Detect Input: HIGH	81	MOUSE D2	O	Mouse Data Output 2
30	DAC1 CS	O	D/A Converter 1 Chip Select: HIGH	82	SCAN0	O	Scan Pulse 0 Output
31	DAC2 CS	O	D/A Converter 2 Chip Select: HIGH	83	SCAN1	O	Scan Pulse 1 Output
32	MOUSE OUT0	O	Mouse Control Output 0	84	SCAN2	O	Scan Pulse 2 Output
33	MOUSE OUT1	O	Mouse Control Output 1	85	SCAN3	O	Scan Pulse 3 Output
34	MOUSE IN0	I	Mouse Control Interrupt Input 0	86	SCAN4	O	Scan Pulse 4 Output
35	MOUSE IN1	I	Mouse Control Interrupt Input 1	87	MUTE1 H	O	Mute: HIGH
36	AVREF	-	+5V	88	MUTE2 H	O	Volume=0: HIGH
37	AVCC	-	+5V	89	V AUDIO H	O	VIDEO Input Mode: HIGH
38	THERMO 1	I	Thermo 1 Temp. Data Input	90	MOUSE D1	O	Mouse Data Output 1
39	THERMO 2	I	Thermo 2 Temp. Data Input	91	MOUSE D0	O	Mouse Data Output 0
40	THERMO 3	I	(Not Used)	92	VSS	-	Grounding Terminal
41	THERMO 4	I	(Not Used)	93	FACTORY H	O	(Not Used)
42	S1 5V	I	Wide Signal Detect Input	94	SRCH H	O	Auto Setup Trigger Pulse
43	FILTER OPEN H	I	Filter Open: HIGH	95	CPS L	I	Composit Sync: LOW Separate Sync: HIGH
44	LAMP ON H	I	(Not Used)				
45	RGB H	I	(Not Used)	96	PC NC H	I	No PC RGB Signal Input: HIGH
46	AVSS	-	Grounding Terminal	97	TXD	O	Transmitted Data (RS232C)
47	INTLACE	I	Interlace Signal Detect	98	RXD	I	Received Data (RS232C)
48	DAC3 CS	O	D/A Converter 3 Chip Selct: HIGH	99	I2C SCK	O	I²C Sereal Clock Output
49	D POWER ON H	O	Digital 5V Reset: HIGH	100	RESO	O	Reset Output
50	POWER ON H	O	Power ON: HIGH				

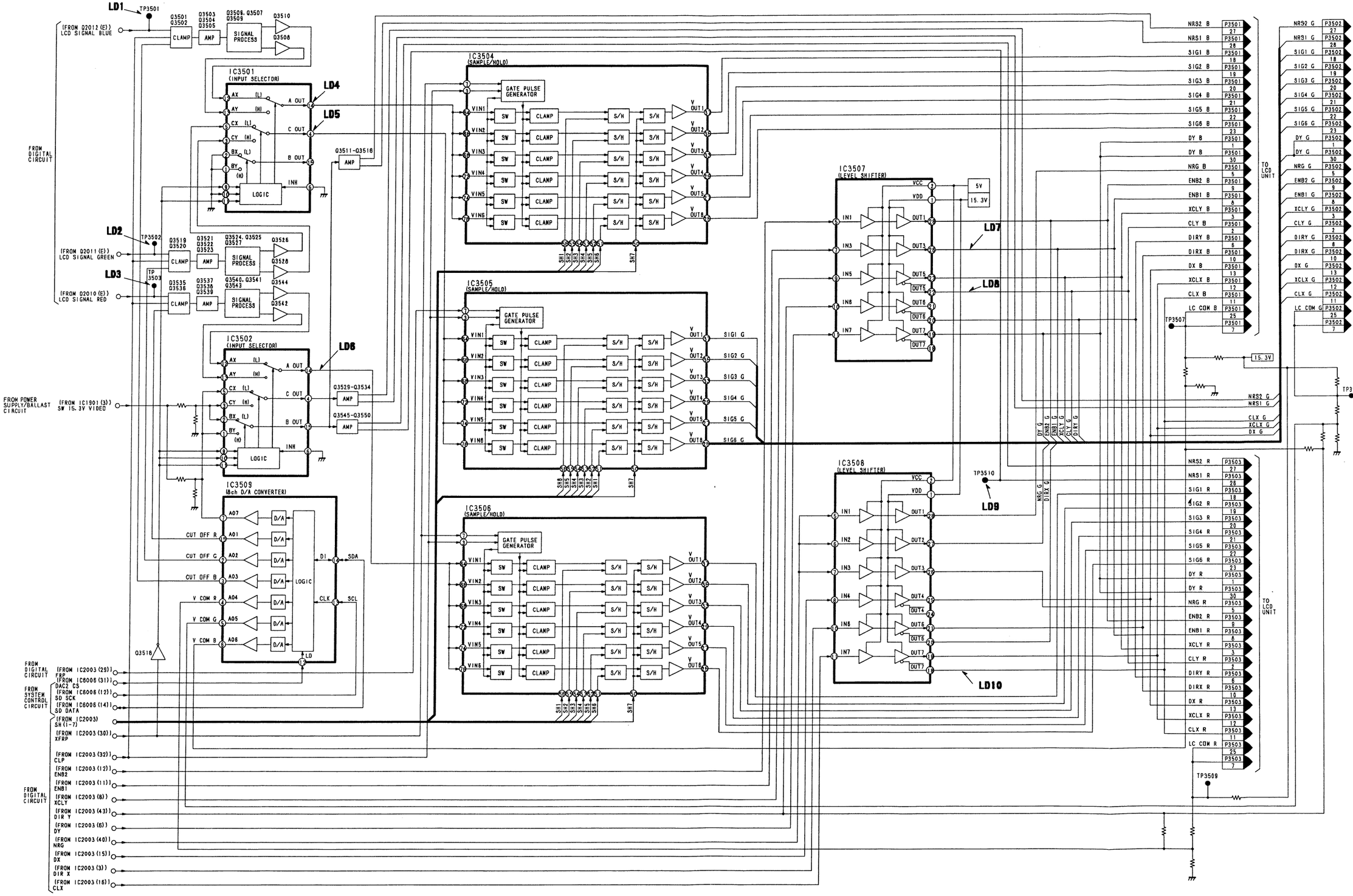
WAVEFORM OF LCD DRIVE PROCESS STAGE



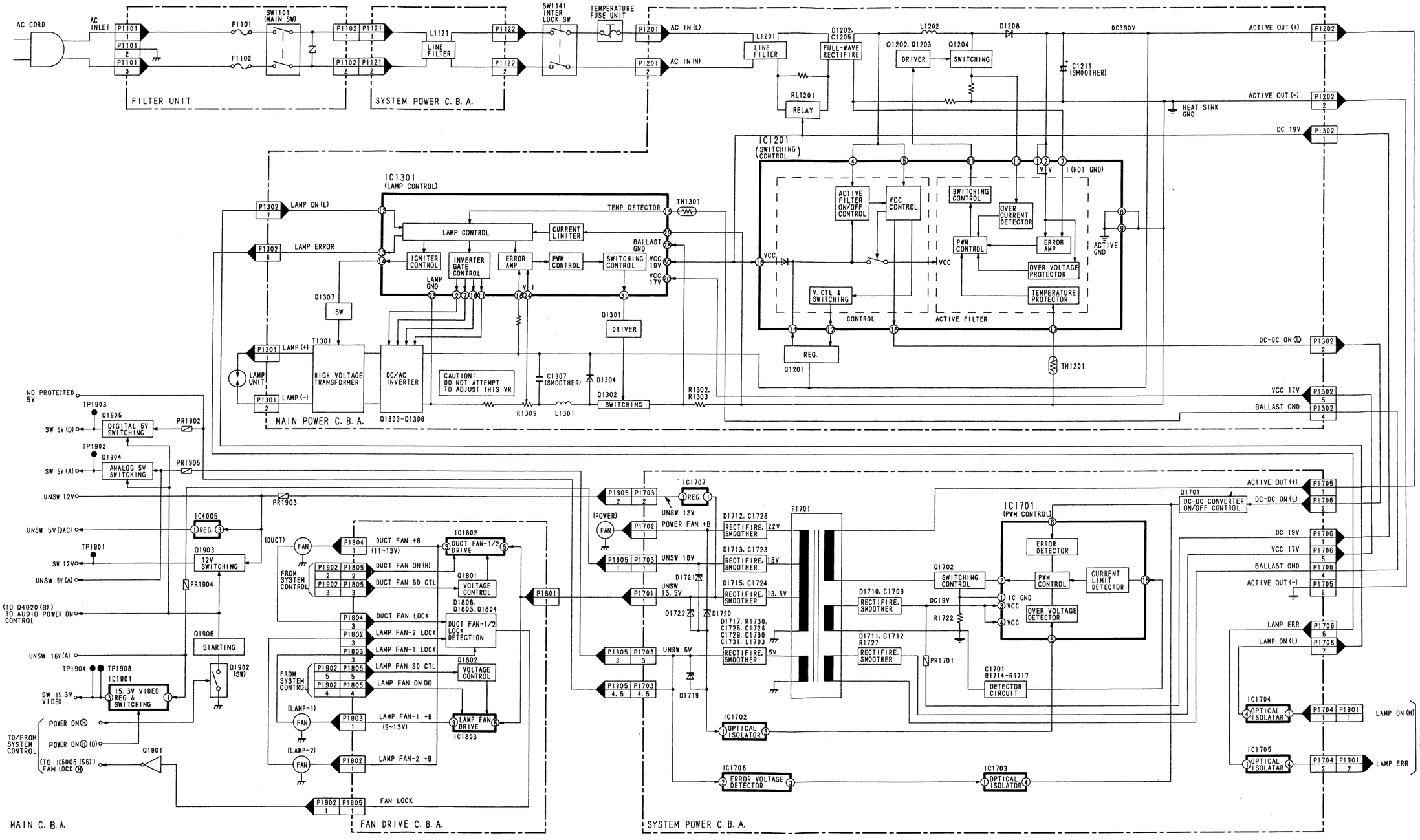
I/O CHART FOR INPUT SERECTOR IC3501 AND IC3502 (CD4053BCMX)

INPUT STATES				ON CHANNELS		
INH	C	B	A	C OUT	B OUT	A OUT
L	L	L	L	CX	BX	AX
L	L	L	H	CX	BX	AY
L	L	H	L	CX	BY	AX
L	L	H	H	CX	BY	AY
L	H	L	L	CY	BX	AX
L	H	L	H	CY	BX	AY
L	H	H	L	CY	BY	AX
L	H	H	H	CY	BY	AY
H	-	-	-	NONE	NONE	NONE

LCD DRIVE PROCESS BLOCK DIAGRAM



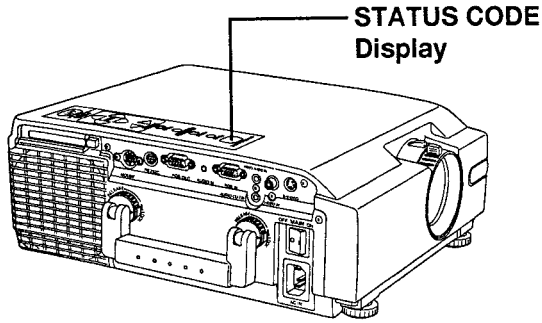
POWER PROCESS BLOCK DIAGRAM



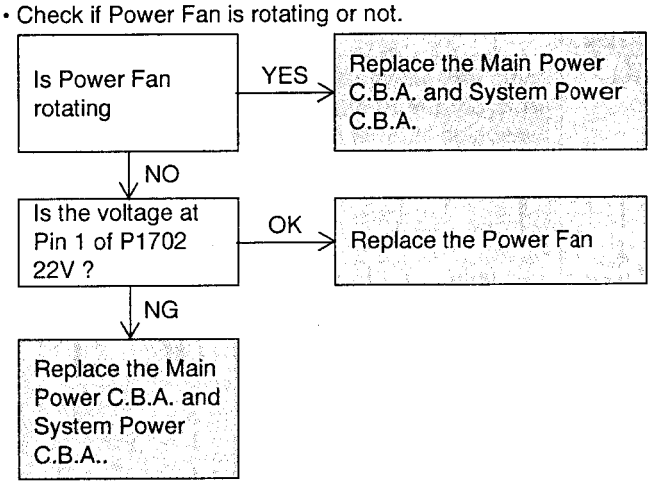
TROUBLESHOOTING HINTS

Status Code Display Indications

Following Status Code will be displayed in the STATUS CODE display.

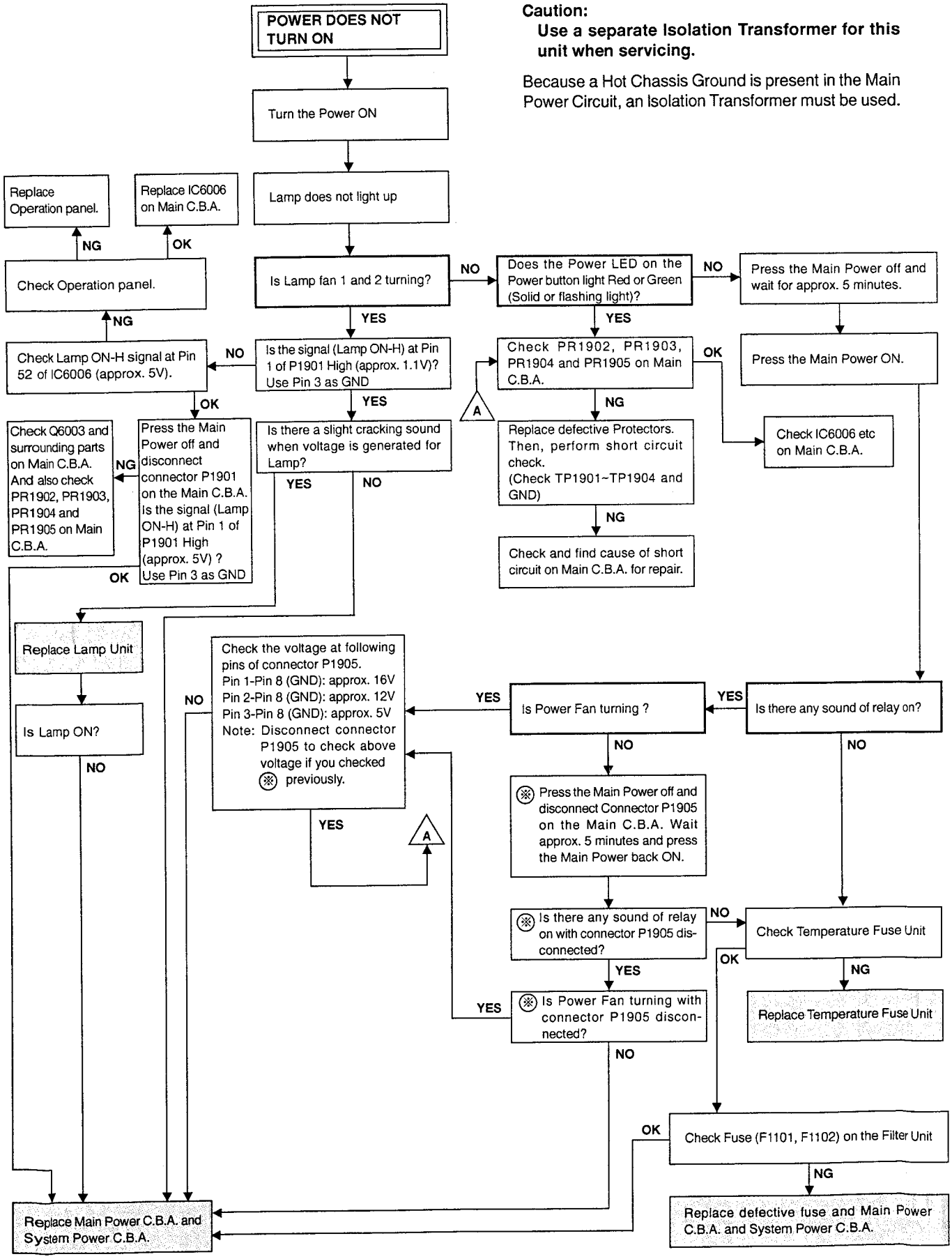


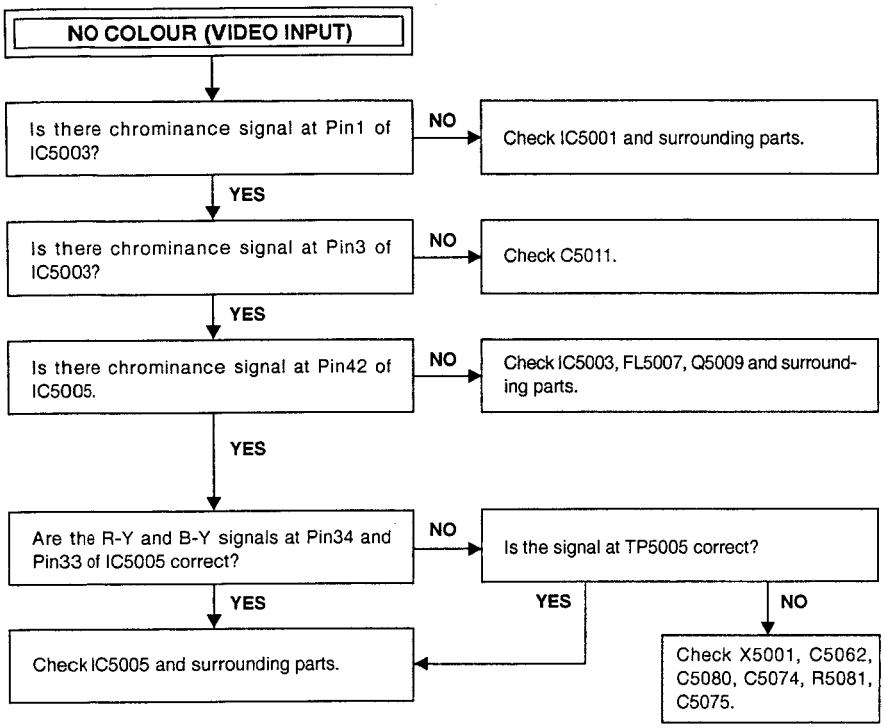
<table>
<tr><th>STATUS CODE</th><th>Symptom</th><th>Problem</th><th>Possible Solution</th></tr>
<tr><td>F-L</td><td rowspan="4">Lamp Unit automatically turns off due to abnormally high internal temperature.
(Stand-by condition)</td><td>• Cooling fan (Duct Fan and/or Lamp Fan 1 and/or Lamp Fan 2) malfunction.</td><td>1) Confirm that all cables are connected to connectors (P1801, P1802, P1803, P1804, P1805, P1902) correctly.
2) Check following fan lock signal
Check Pin 3 of P1804 (Duct Fan lock signal) — Low → Check th voltage at following pins of connector P1801 Pin1-Pin2 (GND): approx, 13.5V
↓ High
Replace Duct Fan
Check Pin 3 of P1803 (Lamp Fan 1 lock signal) — Low → Check th voltage at following pins of connector P1801 Pin1-Pin2 (GND): approx, 13.5V
↓ High
Replace Lamp Fan 1
Check Pin 3 of P1802 (Lamp Fan 2 lock signal) — Low → Check th voltage at following pins of connector P1801 Pin1-Pin2 (GND): approx, 13.5V
↓ High
Replace Lamp Fan 2
Check th voltage at following pins of connector P1801 Pin1-Pin2 (GND): approx, 13.5V
Yes → Replace Fan Drive C.B.A.
No → Replace Main Power C.B.A. and System Power C.B.A.</td></tr>
<tr><td>F-O</td><td>• Misinstalled Air Filter Unit.</td><td>• Properly install Air Filter Unit.</td></tr>
<tr><td>A-n</td><td>• Temperature Sensor malfunction.
(Thermistor on the Duct .)</td><td>• Check the voltage at Pin 1 and Pin 3 of P6002.
(1) Thermistor on the Duct
Condition of sensor / Check Pin: Open / Short
Pin 1 of P6002: 5V / 2.5V
Pin 3 of P6002: 0V / 2.5V
→ Replace the Thermistor C.B.A.</td></tr>
<tr><td>A-0</td><td>• Clogged air filter.
• Blocked air intake.
• The surrounding temperature of the place of use may be too high.</td><td>• Clean the filter.
• Relocate projector to a proper location.
• Place projector so that surrounding temperature is between 5°C (41°F) and 40°C (104°F) and the humidity is between 10% and 80% (with no condensation).</td></tr>
</table>

<table>
<tr><th>STATUS CODE</th><th>Symptom</th><th>Problem</th><th>Possible Solution</th></tr>
<tr><td>L-n</td><td>Lamp does not light up.</td><td>• There is the possibility that Lamp is burned-out.</td><td>• Wait until the Lamp Unit has cooled off (approx. 5 minutes) and try to turn the power back on.
• If this code appears, try above again and again.
• If this code appears continuously more than 5 or 6 times, replace the Lamp Unit.
• If this code appears again after replacement of the Lamp Unit, replace Main Power C.B.A. and System Power C.B.A.</td></tr>
<tr><td>P-2</td><td></td><td>• Lamp Voltage is not correct.</td><td>• Wait until the Lamp Unit has cooled off (approx. 5 minutes) and try to turn the power back on.
• Replace the Lamp Unit.</td></tr>
<tr><td>P-3</td><td>Abnormally high internal temperature.</td><td>• Abnormal temperature rise.</td><td>• Wait until the Lamp Unit has cooled off (approx. 5 minutes) and try to turn the power back on.
• Check if Power Fan is rotating or not.
 
</td></tr>
<tr><td>P-4</td><td></td><td>• Other cause.</td><td>• Wait until the Lamp Unit has cooled off (approx. 5 minutes) and try to turn the power back on.
• Replace the Main Power C.B.A. and System Power C.B.A.</td></tr>
<tr><td>L-1</td><td>Lamp operation time is over 1000 hours.</td><td>• It is nearly time to replace the Lamp Unit.</td><td rowspan="2">• Replace the Lamp unit.</td></tr>
<tr><td>L-0</td><td>Lamp operation time is over 1100 hours.</td><td>• The Lamp Unit must be replaced.</td></tr>
<tr><td>C-d</td><td>Forced cooling fan operating to expedite lamp replacement.</td><td>——</td><td>——</td></tr>
</table>

Caution:
Use a separate Isolation Transformer for this unit when servicing.

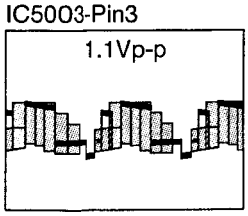
Because a Hot Chassis Ground is present in the Main Power Circuit, an Isolation Transformer must be used.



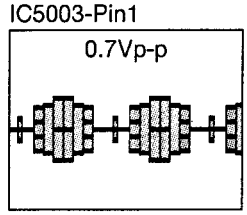


WAVEFORM (VIDEO INPUT)

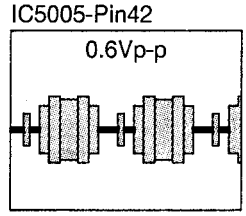
IC5003-Pin3



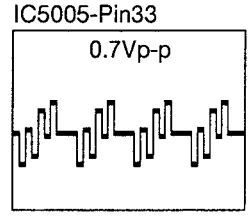
IC5003-Pin1



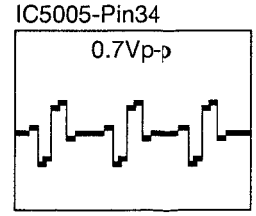
IC5005-Pin42

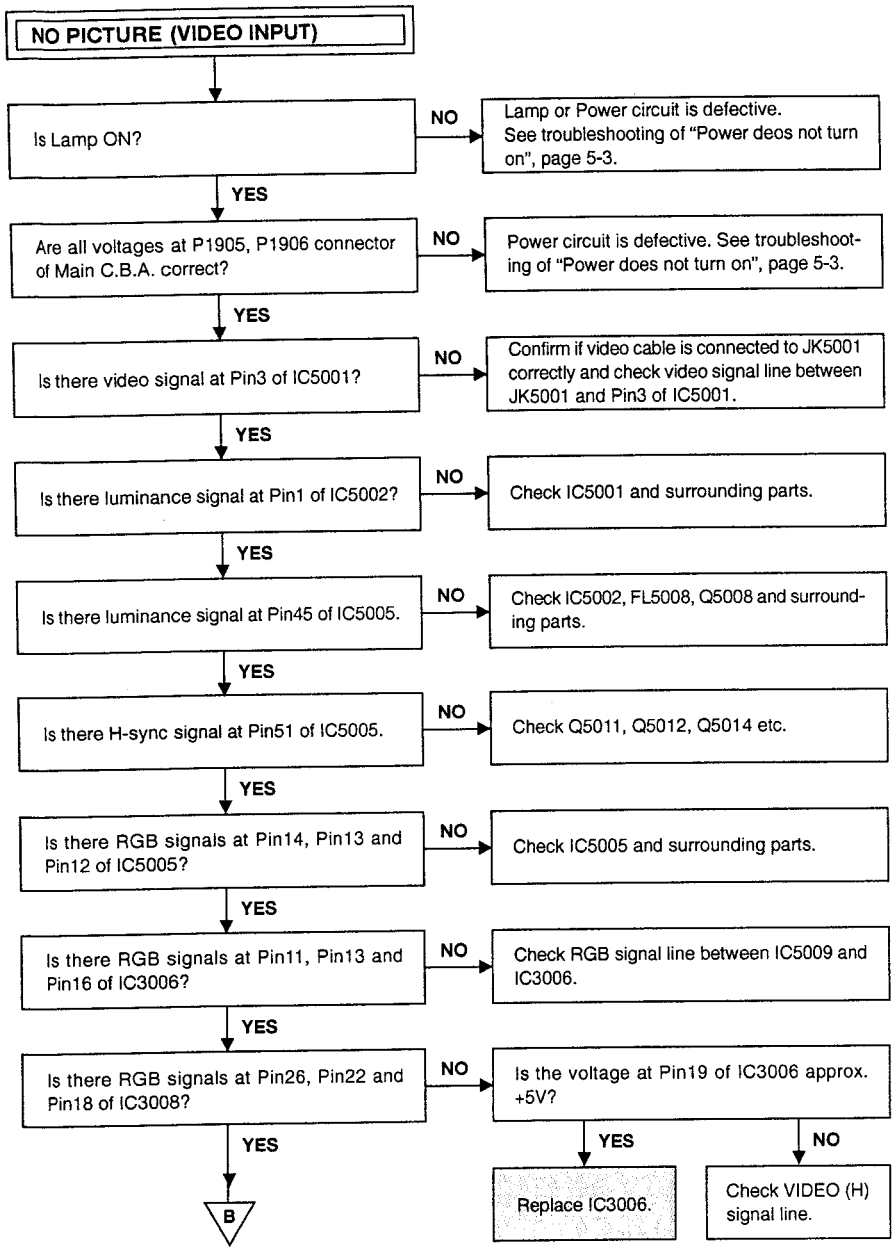


IC5005-Pin33



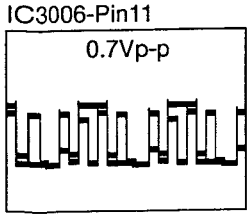
IC5005-Pin34



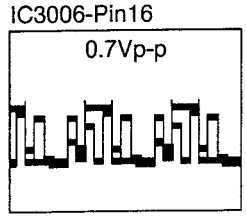


WAVEFORM (VIDEO INPUT)

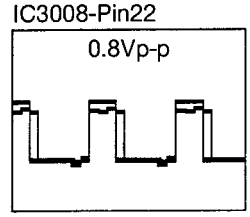
IC3006-Pin11



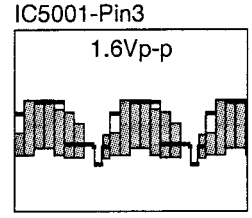
IC3006-Pin16



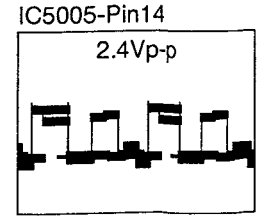
IC3008-Pin22



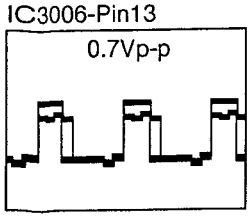
IC5001-Pin3



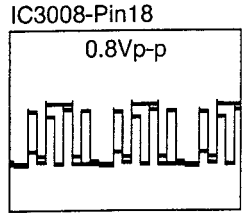
IC5005-Pin14



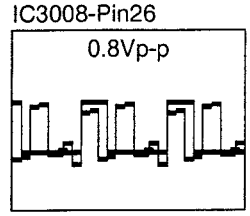
IC3006-Pin13



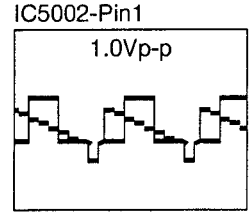
IC3008-Pin18



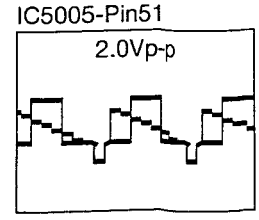
IC3008-Pin26



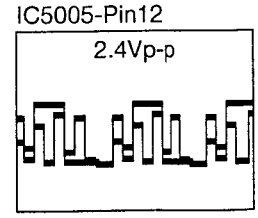
IC5002-Pin1



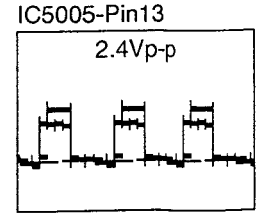
IC5005-Pin51



IC5005-Pin12



IC5005-Pin13

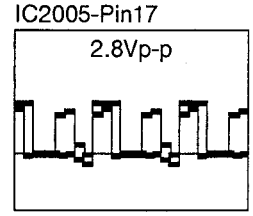


NO PICTURE (RGB SIGNAL INPUT)

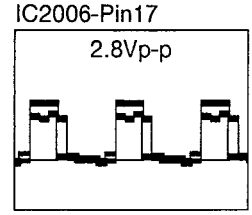
- Is Lamp ON?
  - NO → Lamp or Power circuit is defective. See troubleshooting of "Power deos not turn on", page 5-3.
  - YES ↓
- Are all voltages at P1905 connector of Main C.B.A. correct?
  - NO → Power circuit is defective. See troubleshooting of "Power does not turn on", page 5-3.
  - YES ↓
- Are there RGB signals at C3001, C3002 and C3003?
  - NO → Confirm VGA cable is connected to JK3001 correctly and check RGB signal lines.
  - YES ↓
- Are there RGB signals at Pin2, Pin5 and Pin7 of IC3006?
  - NO → Check Q3004, Q3005, Q3006 and surrounding parts.
  - YES ↓
- Are there RGB signals at Pin26, Pin22 and Pin18 of IC3008?
  - NO → Is the voltage at Pin19 of IC3006 approx. 0V?
    - YES → Replace IC3006.
    - NO → Check VIDEO (H) signal line. Replace if necessary.
  - YES ↓
- B
- Are there RGB signals at Pin1, Pin5, Pin9 of IC3008?
  - NO → Is Clamp pulse signal at Pin15 of IC3008 correct?
    - YES → Check IC3008 and surrounding parts.
    - NO → Check IC2003 and surrounding parts.
  - YES ↓
- C
- Is there RGB signals at Pin17 of IC2005, IC2006, IC2007?
  - NO → Check RGB signal line between IC3008 and IC2005, IC2006 and IC2007.
  - YES ↓
- Is there RGB signals at Pin58, Pin54 and Pin50 of IC2013?
  - NO → Check Digital process circuit. See "troubleshooting of digital process circuit", page 5-8.
  - YES ↓
- Are there RGB signals at TP3501, TP3502 and TP3503?
  - NO → Check Q2010, Q2011, Q2012 and surrounding parts.
  - YES ↓
- Are there signals at Pin14 and Pin4 of IC3501 and Pin14 of IC3502?
  - NO → Check IC3501, IC3502 and surrounding parts.
  - YES ↓
- Are there signals at P3501, P3502 and P3503 connectors?
  - NO → Check IC3504, IC3505, IC3506 and surrounding parts.
  - YES ↓
- Check if three Flexible cables from LCD units are correctly connected with connectors on Main C.B.A. (P3501, P3502 and P3503)?
  - NO → Connect the Flexible cables correctly.
  - YES ↓
- Replace LCD Units.

WAVEFORM (RGB SIGNAL INPUT)

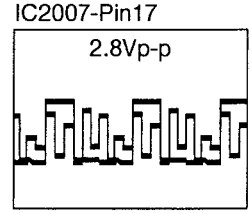
IC2005-Pin17



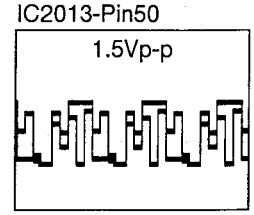
IC2006-Pin17



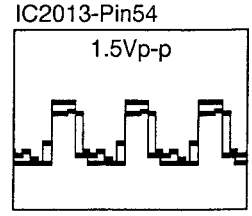
IC2007-Pin17

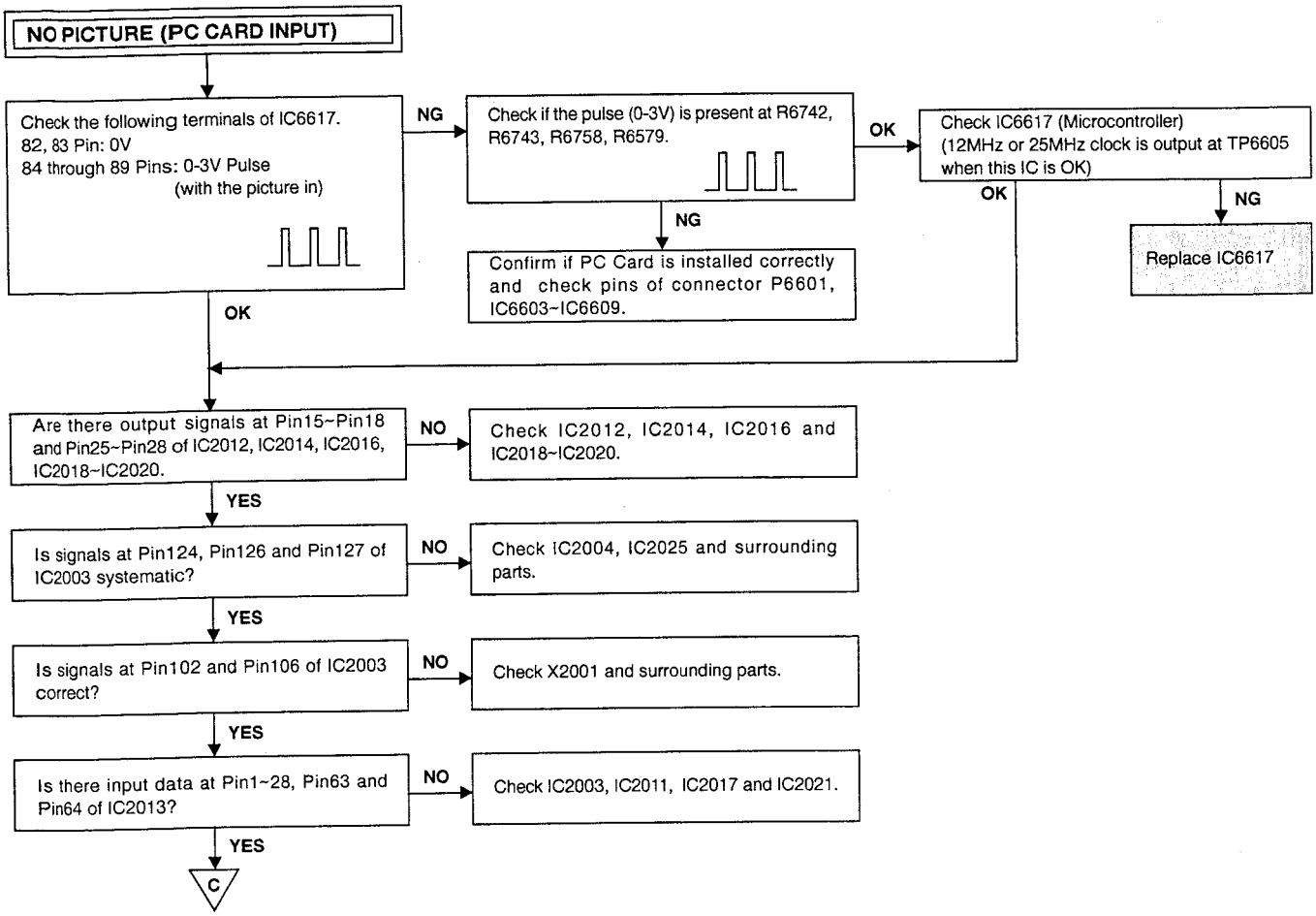


IC2013-Pin50

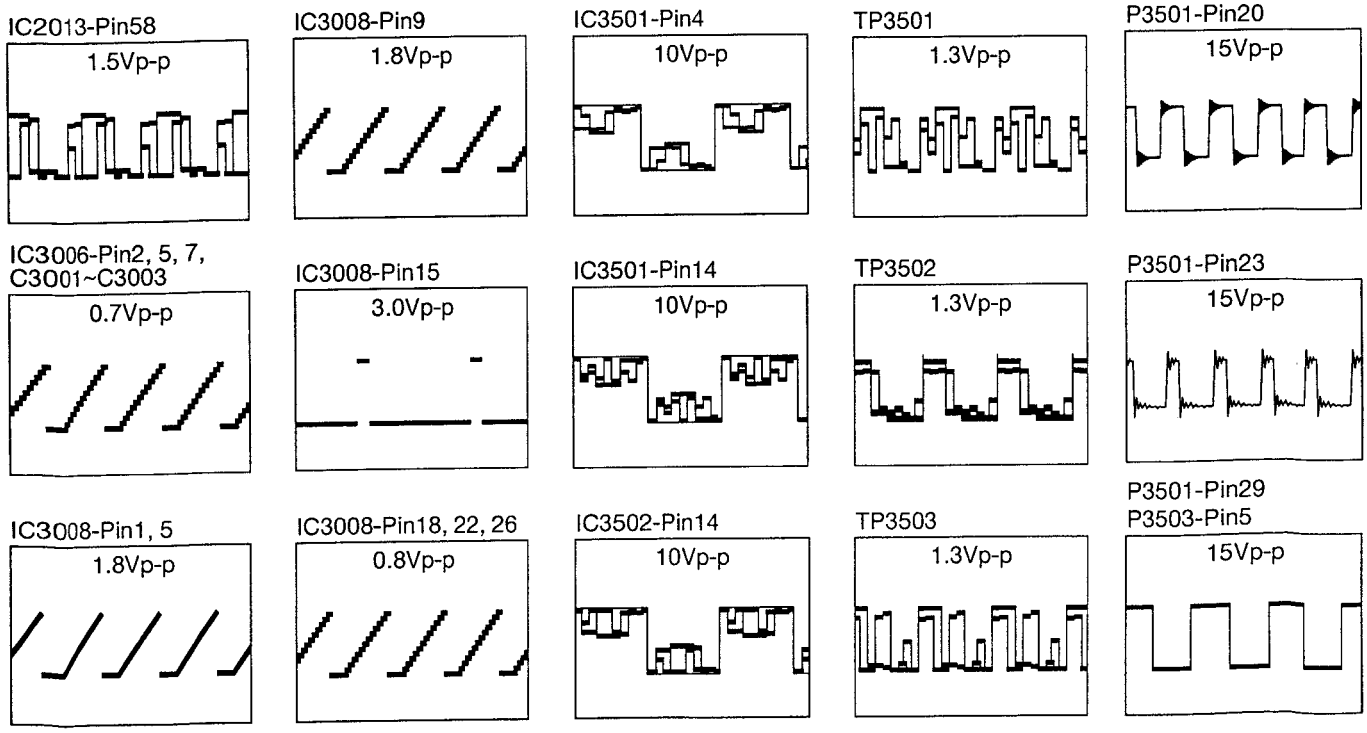


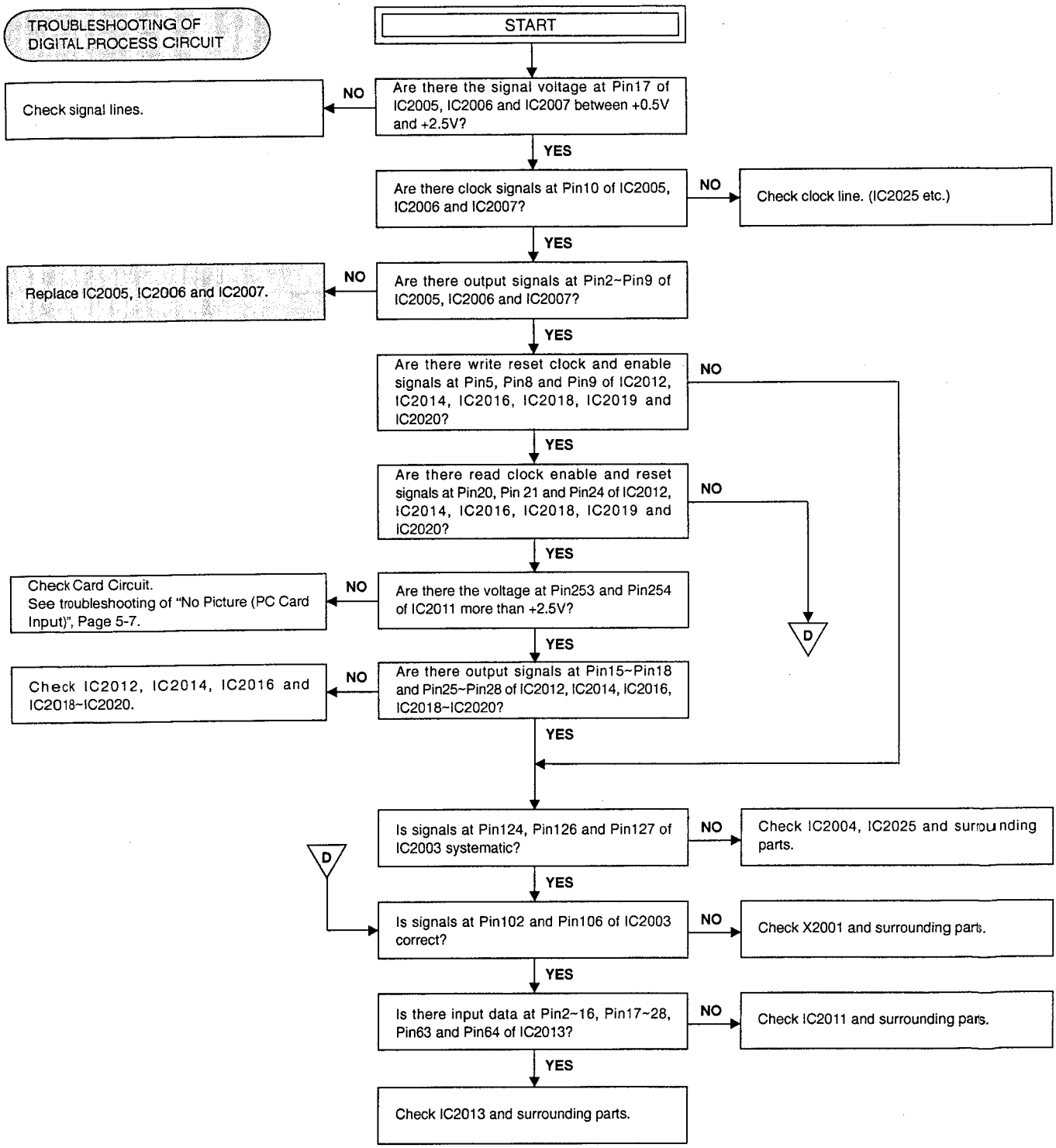
IC2013-Pin54





WAEFORM (RGB SIGNAL INPUT)




TROUBLESHOOTING OF DIGITAL PROCESS CIRCUIT
START
Are there the signal voltage at Pin17 of IC2005, IC2006 and IC2007 between +0.5V and +2.5V?
NO
Check signal lines.
YES
Are there clock signals at Pin10 of IC2005, IC2006 and IC2007?
NO
Check clock line. (IC2025 etc.)
YES
Are there output signals at Pin2~Pin9 of IC2005, IC2006 and IC2007?
NO
Replace IC2005, IC2006 and IC2007.
YES
Are there write reset clock and enable signals at Pin5, Pin8 and Pin9 of IC2012, IC2014, IC2016, IC2018, IC2019 and IC2020?
NO
YES
Are there read clock enable and reset signals at Pin20, Pin 21 and Pin24 of IC2012, IC2014, IC2016, IC2018, IC2019 and IC2020?
NO
YES
Are there the voltage at Pin253 and Pin254 of IC2011 more than +2.5V?
NO
Check Card Circuit.
See troubleshooting of "No Picture (PC Card Input)", Page 5-7.
YES
Are there output signals at Pin15~Pin18 and Pin25~Pin28 of IC2012, IC2014, IC2016, IC2018~IC2020?
NO
Check IC2012, IC2014, IC2016 and IC2018~IC2020.
YES
D
Is signals at Pin124, Pin126 and Pin127 of IC2003 systematic?
NO
Check IC2004, IC2025 and surrounding parts.
YES
D
Is signals at Pin102 and Pin106 of IC2003 correct?
NO
Check X2001 and surrounding parts.
YES
Is there input data at Pin2~16, Pin17~28, Pin63 and Pin64 of IC2013?
NO
Check IC2011 and surrounding parts.
YES
Check IC2013 and surrounding parts.

SCHEMATIC DIAGRAMS AND CIRCUIT BOARDS
SCHEMATIC DIAGRAM AND CIRCUIT BOARD DIAGRAM NOTES

1. Important safety notice
   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components. Use only the specified parts.
2. Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since this drawing was prepared.
3. Use only original replacement parts:
   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.
4. Parts different in shape or size may be used.
   However, only interchangeable parts will be supplied as service replacement parts.

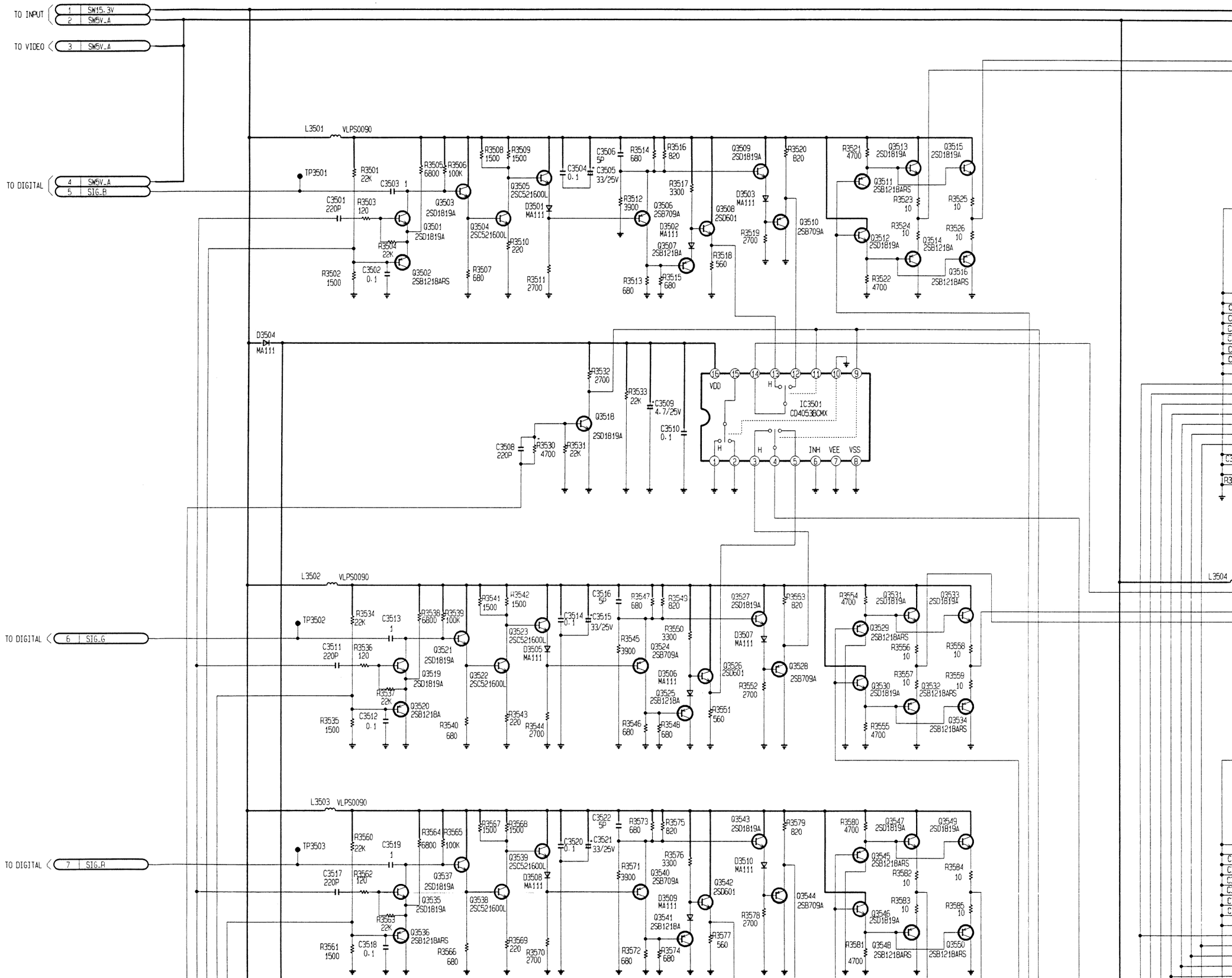
Schematic Diagram Note

1. The part number shown on this drawing is only main part number, except for safety parts. Be sure to make your orders of replacement parts according to the parts list.

VOLTAGE CHART OF LCD DRIVE SCHEMATIC DIAGRAM

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
IC3501		22	0	78	0	53	0.7	29	7.0	4	0	29	0	E	9.7	E	4.2	E	10.3	8	7.0	2	0
1	0	23	0	79	0	54	0.7	30	15.1	5	0.9	30	15.2	C	0	C	0	C	15.2	9	7.0	3	0
2	0	24	0	80	0	56	0.7	31	0	6	0	**IC3509**		B	9.1	B	3.6	B	11.0	10	7.0	4	4.6
3	9.7	25	7.0	**IC3505**		57	3.4	32	0	7	0.9	1	0	**Q3511**		**Q3526**		**Q3540**		11	7.0	5	4.6
4	7.0	26	0	1	0	58	0	33	7.0	8	0	2	2.1	E	5.1	E	4.3	E	11.3	12	7.0	6	6.0
5	4.2	27	7.0	2	0	59	1.2	34	0	9	1.7	3	2.2	C	0	C	15.2	C	2.6	13	7.0	7	0
6	0	28	0	3	0.2	60	0	35	7.0	10	4.0	4	2.5	B	4.5	B	4.8	B	10.7	14	0	8	7.0
7	0	29	7.0	4	4.9	61	0	36	0	11	0	5	2.5	**Q3512**		**Q3527**		**Q3541**		15	0	9	7.0
8	0	30	15.1	5	9.3	62	0	37	7.0	12	0	6	2.6	E	4.0	E	10.7	E	4.3	16	0	10	7.0
9	7.5	31	0	6	1.2	63	0	38	0	13	0	7	2.6	C	15.2	C	15.2	C	0	17	15.2	11	7.0
10	0	32	0	7	1.7	64	7.0	39	0	14	0	8	5.0	B	4.5	B	11.3	B	3.7	18	0.2	12	7.0
11	7.5	33	7.0	8	1.0	65	0	40	0	15	0	9	5.0	**Q3513**		**Q3528**		**Q3542**		19	7.9	13	7.0
12	9.7	34	0	9	13.6	66	7.0	41	0	16	0	10	0	E	4.6	E	9.7	E	4.3	20	7.3	14	0
13	4.2	35	7.0	10	13.6	67	0	42	0	17	0	11	3.6	C	15.2	C	0	C	15.2	21	0	15	0
14	7.0	36	0	11	13.6	68	7.0	43	13.6	18	15.1	12	0	B	5.1	B	9.1	B	4.9	22	4.1	16	0
15	0	37	7.0	12	13.6	69	0	44	13.6	19	0.1	13	4.4	**Q3514**		**Q3529**		**Q3543**		23	4.0	17	15.2
16	14.6	38	0	13	13.6	70	15.1	45	13.6	20	0	14	0.7	E	4.6	E	5.1	E	9.7	24	6.0	18	0.2
IC3502		39	0	14	13.6	71	0	46	13.6	21	15.2	15	2.1	C	0	C	0	C	15.2	25	0	19	7.8
1	7.0	40	0	15	1.2	72	7.0	47	13.6	22	7.7	16	0	B	4.0	B	4.5	B	10.3	26	1.1	20	7.3
2	2.0	41	0	16	4.9	73	0	48	13.6	23	7.7	**Q3501**		**Q3515**		**Q3530**		**Q3544**		27	15.2	21	0
3	2.0	42	0	17	9.3	74	7.0	49	0	24	15.2	E	1.8	E	4.6	E	4.0	E	9.7	28	7.7	22	4.1
4	4.5	43	13.6	18	0	75	0	50	0.7	25	0	C	2.5	C	15.2	C	15.2	C	0	29	7.6	23	4.0
5	7.0	44	13.6	19	5.1	76	7.0	51	3.4	26	4.0	B	1.5	B	5.1	B	4.5	B	9.1	30	0.1	24	6.0
6	0	45	13.6	20	0	77	0	52	0.7	27	0.1	**Q3502**		**Q3516**		**Q3531**		**Q3545**		**P3502**		25	0
7	0	46	13.6	21	0	78	0	53	0.7	28	4.0	E	1.8	E	4.6	E	4.6	E	5.1	1	0.1	26	1.1
8	0	47	13.6	22	0	79	0	54	0.7	29	0	C	0	C	0	C	15.2	C	0	2	0	27	15.2
9	7.5	48	13.6	23	0	80	0	55	0.7	30	15.2	B	1.1	B	4.0	B	5.1	B	4.5	3	0	28	7.7
10	7.5	49	0	24	0	**IC3606**		56	0.7	**IC3508**		**Q3503**		**Q3518**		**Q3532**		**Q3546**		4	4.6	29	7.7
11	7.5	50	0.7	25	7.0	1	0	57	0	1	15.2	E	1.9	E	0	E	4.5	E	4.0	5	4.6	30	0.1
12	9.7	51	3.4	26	0	2	0	58	0	2	5.1	C	15.2	C	7.6	C	0	C	15.2	6	6.0		
13	4.3	52	0.7	27	7.0	3	0.2	59	0	3	0	B	2.5	B	0.3	B	4.0	B	4.5	7	0	**TP3501**	1.1
14	7.0	53	0.7	28	0	4	5.0	60	0	4	0	**Q3504**		**Q3519**		**Q3533**		**Q3547**		8	7.0	**TP3502**	1.1
15	4.5	54	0.7	29	7.0	5	9.3	61	0	5	0.2	E	1.2	E	1.8	E	4.6	E	4.6	9	7.0	**TP3503**	1.1
16	14.6	55	0.7	30	15.1	6	1.2	62	0	6	0.2	C	11.0	C	2.5	C	15.2	C	15.2	10	7.0	**TP3504**	7.0
IC3504		56	0.7	31	0	7	1.6	63	0	7	0.2	B	1.9	B	1.5	B	5.1	B	5.1	11	7.0	**TP3505**	7.0
1	0	57	0	32	0	8	1.0	64	7.0	8	0.1	**Q3505**		**Q3520**		**Q3534**		**Q3548**		12	7.0	**TP3506**	7.0
2	0	58	1.2	33	7.0	9	13.6	65	0	9	0	E	10.3	E	1.8	E	4.5	E	4.6	13	7.0	**TP3507**	6.0
3	0.2	59	0	34	0	10	13.6	66	7.0	10	0	C	15.2	C	0	C	0	C	0	14	0	**TP3508**	6.0
4	4.9	60	0	35	7.0	11	13.6	67	0	11	1.9	B	11.1	B	1.1	B	4.0	B	4.0	15	0	**TP3509**	6.0
5	9.2	61	0	36	0	12	13.6	68	7.0	12	0	**Q3506**		**Q3521**		**Q3535**		**Q3549**		16	0	**TP3510**	4.6
6	1.2	62	0	37	7.0	13	13.6	69	0	13	0	E	10.3	E	1.3	E	1.8	E	4.6	17	15.2		
7	1.6	63	0	38	0	14	13.6	70	15.1	14	0	C	3.6	C	11.0	C	2.5	C	15.2	18	0.2		
8	1.0	64	7.0	39	0	15	1.2	71	0	15	0	B	9.7	B	1.9	B	1.5	B	5.1	19	7.8		
9	13.6	65	0	40	0	16	4.9	72	7.0	16	0	**Q3507**		**Q3522**		**Q3536**		**Q3550**		20	7.3		
10	13.6	66	7.0	41	0	17	9.3	73	0	17	0	E	4.2	E	1.9	E	1.8	E	4.6	21	15.1		
11	13.6	67	0	42	0	18	0	74	7.0	18	7.3	C	0	C	15.2	C	0	C	0	22	4.1		
12	13.6	68	7.0	43	13.6	19	5.1	75	0	19	7.8	B	3.6	B	2.5	B	1.1	B	4.0	23	4.0		
13	0	69	0	44	13.6	20	0	76	7.0	20	15.1	**Q3508**		**Q3523**		**Q3537**				24	6.0		
14	13.6	70	15.1	45	13.6	21	0	77	0	21	0	E	4.3	E	10.3	E	1.9	**P3501**		25	0		
15	1.2	71	0	46	13.6	22	0	78	0	22	15.2	C	15.2	C	15.2	C	15.2	1	0.1	26	1.1		
16	4.9	72	7.0	47	13.6	23	0	79	0	23	0	B	4.8	B	11.0	B	2.5	2	0	27	15.2		
17	9.3	73	0	48	13.6	24	0	80	0	24	15.2	**Q3509**		**Q3524**		**Q3538**		3	0	28	7.7		
18	0	74	7.0	49	0	25	0	**IC3507**		25	0.2	E	9.7	E	11.3	E	1.2	4	4.6	29	7.7		
19	5.1	75	0	50	0.7	26	0	1	15.2	26	1.1	C	15.2	C	2.6	C	11.0	5	4.6	30	0.1		
20	0	76	7.0	51	0.7	27	7.0	2	5.1	27	1.1	B	10.3	B	10.7	B	1.9	6	6.0	**P3503**			
21	0	77	0	52	0.7	28	0	3	0	28	1.1	**Q3510**		**Q3525**		**Q3539**		7	0	1	0.1		

SCHEMATIC DIAGARM
LCD DRIVE SCHEMATIC DIAGARM



L3502 VLPS0090

TO DIGITAL 6 SIG_G

TP3502

R3534 22K
C3513 1
R3538 6800
R3539 100K
R3541 1500
R3542 1500
C3516 5P
C3514 0.1
C3515 33/25V
R3547 680
R3549 820
Q3527 2SD1819A
R3553 820
R3554 4700
Q3531 2SD1819A
Q3533 2SD1819A

C3511 220P
R3536 120
Q3521 2SD1819A
Q3523 2SC521600L
D3505 MA111
R3545 3900
Q3524 2SB709A
R3550 3300
D3507 MA111
Q3529 2SB1218ARS
R3556 10
R3558 10

Q3519 2SD1819A
Q3522 2SC521600L
D3506 MA111
Q3526 2SD601
Q3528 2SB709A
R3552 2700
R3557 10
R3559 10
Q3530 2SD1819A
Q3532 2SB1218ARS

R3537 22K
Q3520 2SB1218A
R3535 1500
C3512 0.1
R3540 680
R3543 220
R3544 2700
R3546 680
R3548 680
Q3525 2SB1218A
R3551 560
R3555 4700
Q3534 2SB1218ARS

L3503 VLPS0090

TO DIGITAL 7 SIG_R

TP3503

R3560 22K
C3519 1
R3564 6800
R3565 100K
R3567 1500
R3568 1500
C3522 5P
C3520 0.1
C3521 33/25V
R3573 680
R3575 820
Q3543 2SD1819A
R3579 820
R3580 4700
Q3547 2SD1819A
Q3549 2SD1819A

C3517 220P
R3562 120
Q3537 2SD1819A
Q3539 2SC521600L
D3508 MA111
R3571 3900
Q3540 2SB709A
R3576 3300
D3510 MA111
Q3545 2SB1218ARS
R3582 10
R3584 10

Q3535 2SD1819A
Q3538 2SC521600L
Q3542 2SD601
Q3544 2SB709A
R3578 2700
R3583 10
R3585 10
Q3546 2SD1819A

R3563 22K
Q3536 2SB1218ARS
R3561 1500
C3518 0.1
R3566 680
R3569 220
R3570 2700
Q3541 2SB1218A
R3577 560
R3572 680
R3574 680
R3581 4700
Q3548 2SB1218ARS
Q3550 2SB1218ARS

R3532 2700
R3533 22K
C3509 4.7/25V
C3510 0.1
Q3518 2SD1819A
C3508 220P
R3530 4700
R3531 22K

IC3501 CD40538CMX
VDD
H
INH
VEE
VSS

L3504

TO INPUT 8 SD_SCK
TO INPUT 9 SD_DATA
TO DIGITAL 10 SD_SCK
TO DIGITAL 11 SD_DATA
TO SYSTEM CONTROL 12 DAC2_CS
TO SYSTEM CONTROL 13 SD_SCK
TO SYSTEM CONTROL 14 SD_DATA

R3586 12K
R3587 1500
R3588 220
C3523 0.1
R3589 10K
R3590 47K
C3524 0.1
C3525 0.1

IC3502 CD40538CMX

L3506

R3664 15K
R3666 0
R3668 0
R3670 0
C3618 0.1

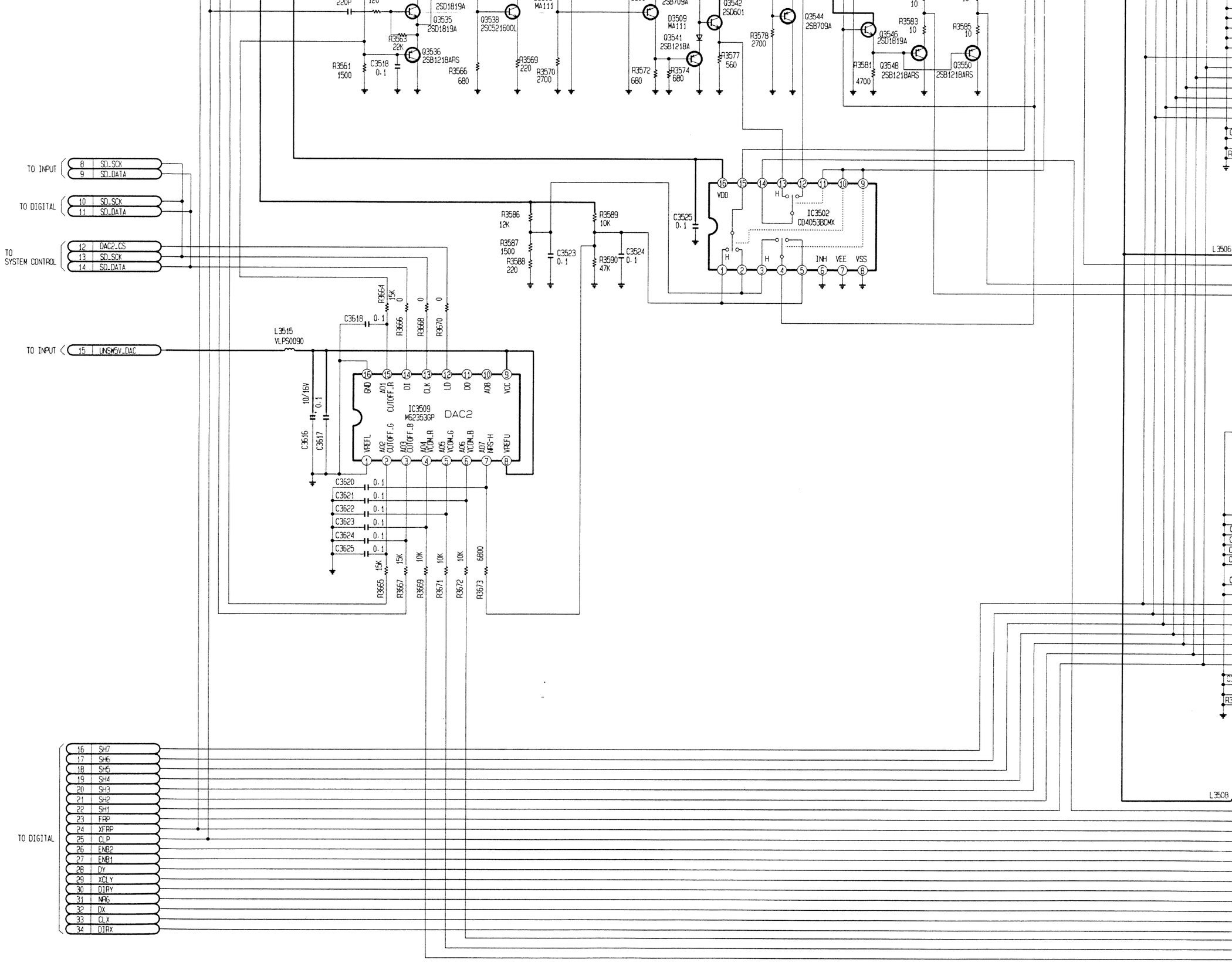
L3515 VLPS0090

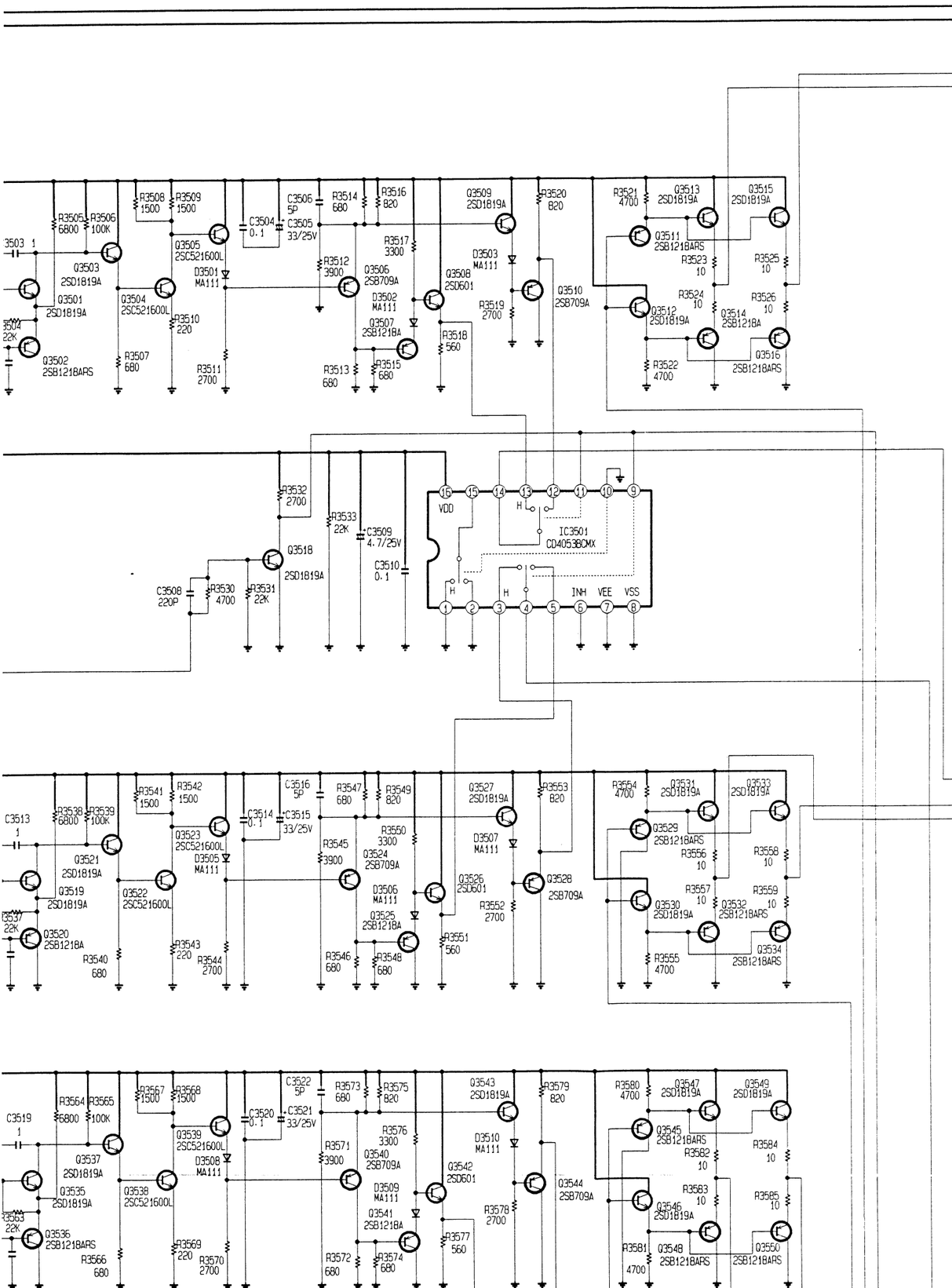
TO INPUT 15 UNSW5V_DAC

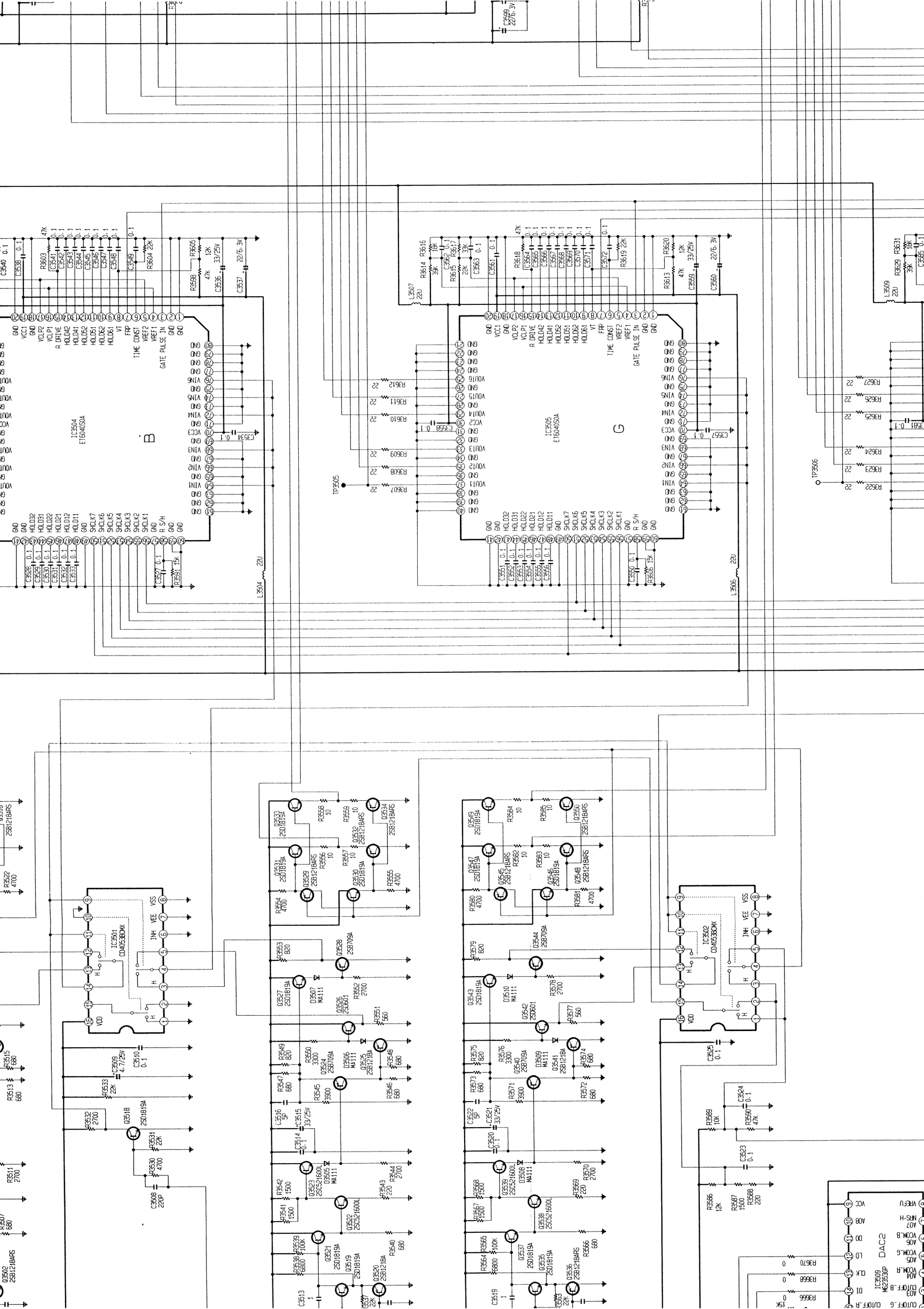
10/16V
C3516 0.1
C3517

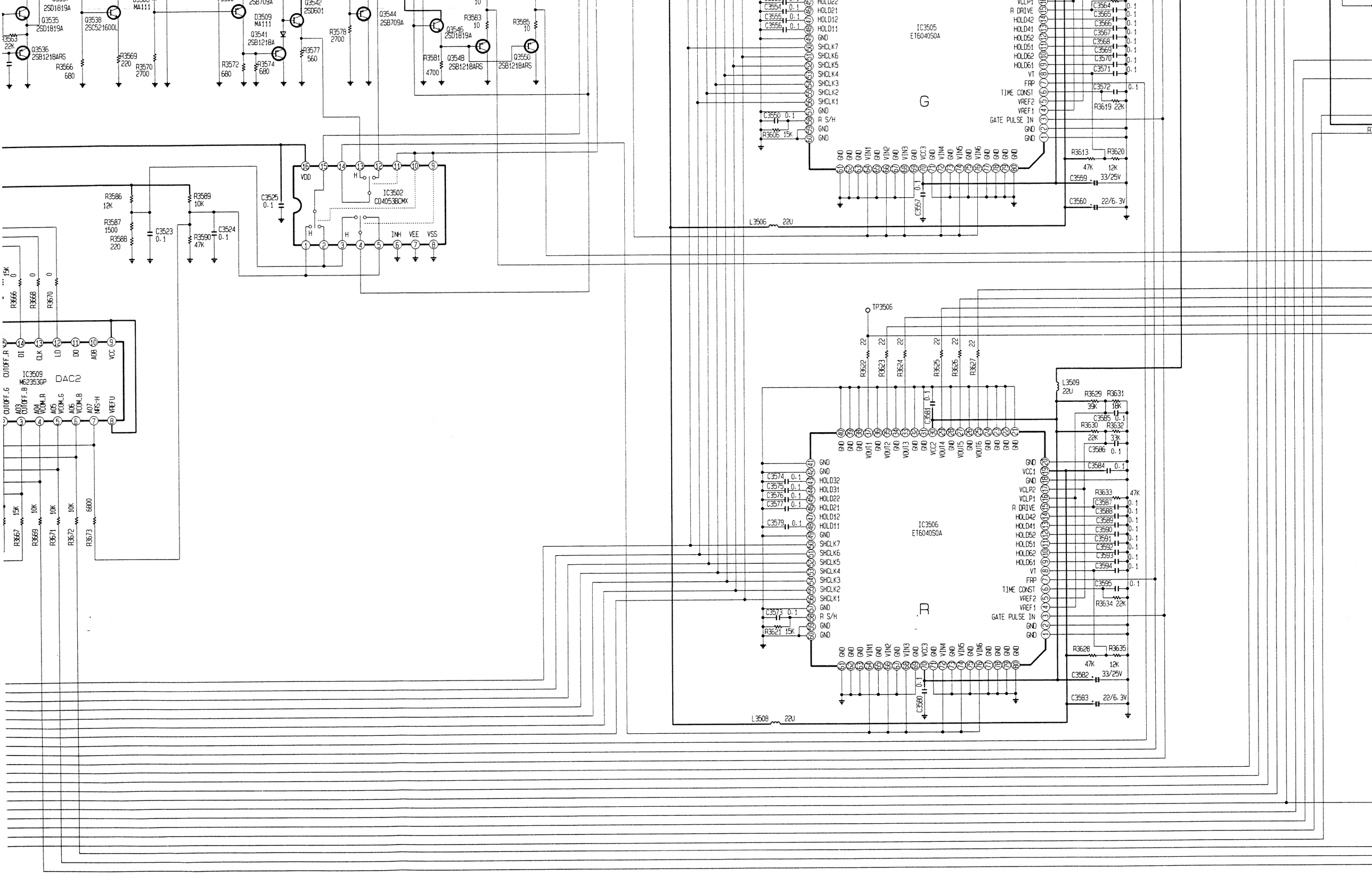
IC3509 MG2353GP DAC2
GND A01 CUTOFF_R DI CLK LD DO A08 VCC
VREFL A02 CUTOFF_G A03 CUTOFF_B A04 VCOM_R A05 VCOM_G A06 VCOM_B A07 HAS-H VREFU

C3620 0.1
C3621 0.1
C3622 0.1
C3623 0.1
C3624 0.1
C3625 0.1


Q3535 2SD1819A
Q3536 2SB1218ARS
Q3538 2SC5216OOL
D3509 MA111
Q3541 2SB1218A
Q3542 2SD601
Q3544 2SB709A
Q3546 2SD1819A
Q3548 2SB1218ARS
Q3550 2SB1218ARS
R3561 1500
C3518 0.1
R3563 22K
R3566 680
R3569 220
R3570 2700
R3572 680
R3574 680
R3577 560
R3578 2700
R3581 4700
R3583 10
R3585 10
C3525 0.1
R3586 12K
R3587 1500
R3588 220
C3523 0.1
R3589 10K
R3590 47K
C3524 0.1
IC3502 CD4053BCMX
VDD
INH
VEE
VSS
TO INPUT 8 SD_SCK
9 SD_DATA
TO DIGITAL 10 SD_SCK
11 SD_DATA
TO SYSTEM CONTROL 12 DAC2_CS
13 SD_SCK
14 SD_DATA
TO INPUT 15 UNSW5V_DAC
L3515 VLPS0090
C3616 10/16V
C3617 0.1
C3618 0.1
R3664 15K
R3665 15K
R3666 0
R3667 15K
R3668 0
R3669 10K
R3670 0
R3671 10K
R3672 10K
R3673 6800
IC3509 M62353GP DAC2
GND
AO1 CUTOFF_R
DI
CLK
LD
DO
AO8
VCC
VREFL
AO2 CUTOFF_G
AO3 CUTOFF_B
AO4 VCOM_R
AO5 VCOM_G
AO6 VCOM_B
AO7 HPS-H
VREFU
C3620 0.1
C3621 0.1
C3622 0.1
C3623 0.1
C3624 0.1
C3625 0.1
L3506
L3508
TO DIGITAL 16 SH7
17 SH6
18 SH5
19 SH4
20 SH3
21 SH2
22 SH1
23 FRP
24 XFRP
25 CLP
26 ENB2
27 ENB1
28 DY
29 XCLY
30 DIRY
31 NRG
32 DX
33 CLX
34 DIRX


IC3504
ET6040S0A
IC3505
ET6040S0A
IC3501
CD4053BCMX
TP3504
TP3505
L3504 22U
L3505 22U
L3507 22U
L3510 22U
B


B
G
IC3504
ET6040SOA
IC3505
ET6040SOA
IC3501
CD4053BCMX
IC3502
CD4053BCMX
TP3505
TP3506
TIME CONST
GATE PULSE IN
R A DRIVE
VCLP1
VCLP2
VCC1
VDD
VEE
VSS
INH
H
L
DAC2
M62353GP


Q3535 2SD1819A
Q3538 2SC521600L
Q3536 2SB121BARS
R3566 680
R3569 220
R3570 2700
R3572 680
R3574 680
Q3541 2SB121BA
D3509 MA111
R3577 560
R3578 2700
Q3544 2SB709A
Q3546 2SD1819A
R3581 4700
Q3548 2SB121BARS
R3583 10
Q3550 2SB121BARS
R3585 10
IC3505 ET6040S0A
G
HOLD22
HOLD21
HOLD12
HOLD11
SHCLK7
SHCLK6
SHCLK5
SHCLK4
SHCLK3
SHCLK2
SHCLK1
R S/H
C3550 0.1
R3606 15K
VCLP1
R DRIVE
HOLD42
HOLD41
HOLD52
HOLD51
HOLD62
HOLD61
VT
FRP
TIME CONST
VREF2
VREF1
GATE PULSE IN
C3564
C3565
C3566
C3567
C3568
C3569
C3570
C3571
C3572
R3619 22K
R3613 47K
R3620 12K
C3559 33/25V
C3560 22/6.3V
C3557 0.1
L3506 22U
R3586 12K
R3589 10K
R3587 1500
R3588 220
C3523 0.1
R3590 47K
C3524 0.1
C3525 0.1
IC3502 CD4053BCMX
VDD
INH
VEE
VSS
R3666 0
R3668 0
R3670 0
R3667 15K
R3669 10K
R3671 10K
R3672 10K
R3673 6800
IC3509 M62353GP
DAC2
CUTOFF_R
CUTOFF_G
CUTOFF_B
VCOM_R
VCOM_G
VCOM_B
MMS-H
VREFU
TP3506
R3622 22
R3623 22
R3624 22
R3625 22
R3626 22
R3627 22
C3581 0.1
L3509 22U
R3629 39K
R3631 10K
C3585 0.1
R3630 22K
R3632 33K
C3586 0.1
C3584 0.1
R3633 47K
C3587 0.1
C3588 0.1
C3589 0.1
C3590 0.1
C3591 0.1
C3592 0.1
C3593 0.1
C3594 0.1
C3595 0.1
R3634 22K
R3628 47K
R3635 12K
C3582 33/25V
C3583 22/6.3V
C3580 0.1
L3508 22U
C3574 0.1
C3575 0.1
C3576 0.1
C3577 0.1
C3579 0.1
C3573 0.1
R3621 15K
IC3506 ET6040S0A
R

R3597 22

L3505 22U

R3599 39K

R3601 18K

C3539 0.1

R3600 22K

R3602 33K

C3540 0.1

C3538 0.1

R3603 47K

C3541 0.1

C3542 0.1

C3543 0.1

C3544 0.1

C3545 0.1

C3546 0.1

C3547 0.1

C3548 0.1

C3549 0.1

R3604 22K

R3598 47K

R3605 12K

C3536 33/25V

C3537 22/6.3V

GND VOUT6 GND GND GND GND

GND VCC1 GND VCLP2 VCLP1 R DRIVE HOLD42 HOLD41 HOLD52 HOLD51 HOLD62 HOLD61 VT FRP TIME CONST VREF2 VREF1 GATE PULSE IN GND GND

GND VIN6 GND GND GND GND

L3510 22U

L3511 22U

IC3507 LC4105V-TLM

VDD VCC NC NC IN1 IN2 IN3 IN4 IN5 IN6 IN7 NC NC VSS VSS1

VDD1 NC OUT1 OUT2 OUT3 /OUT4 OUT5 /OUT5 OUT6 /OUT6 OUT7 /OUT7 NC VSS1

C3596 0.1

C3597 0.1

C3598 0.1

R3636 22K

R3637 22

R3638 22

R3639 22

R3640 22

R3641 22

R3642 22

TP3507

P3501

30	DY
29	VSSY
28	VSSY
27	NRS2
26	NRS1
25	LCCOM
24	VSSX
23	SIG6[B]
22	SIG5[B]
21	SIG4[B]
20	SIG3[B]
19	SIG2[B]
18	SIG1[B]
17	VSSX
16	NC
15	NC
14	VDDX
13	DX
12	XCLX
11	CLX
10	DIRX
9	ENB2[B]
8	ENB1[B]
7	LCCOM
6	DIRY
5	NRG
4	VDDY
3	XCLY
2	CLY
1	DY

TO LCD BLUE UNIT

C3606 0.1

L3512 22U

R3653 56K

R3654 22K

R3652 150K

R3655 12K

C3604 1

C3605 33/25V

C3607 0.1

R3612 22

L3507 22U

R3614 39K

R3616 18K

C3562 0.1

R3615 22K

R3617 33K

C3563 0.1

C3561 0.1

R3618 47K

C3564 0.1

C3565 0.1

C3566 0.1

C3567 0.1

C3568 0.1

C3569 0.1

C3570 0.1

C3571 0.1

C3572 0.1

GND VOUT6 GND GND GND GND

GND VCC1 GND VCLP2 VCLP1 R DRIVE HOLD42 HOLD41 HOLD52 HOLD51 HOLD62 HOLD61 VT FRP TIME CONST VREF2 VREF1 GATE PULSE IN GND GND

GND VIN6 GND GND GND GND

IC3508 LC4105V-TLM

VDD VCC NC NC IN1 IN2 IN3 IN4 IN5 IN6 IN7 NC NC VSS VSS1

VDD1 NC OUT1 OUT2 OUT3 /OUT4 OUT5 /OUT5 OUT6 /OUT6 OUT7 /OUT7 NC VSS1

C3599 22/6.3V

C3600 0.1

C3601 0.1

C3602 0.1

C3603 33/25V

R3644 22

R3645 22

R3646 22

R3647 22

TP3508

P3502

30	DY
29	VSSY
28	VSSY
27	NRS2
26	NRS1
25	LCCOM
24	VSSX
23	SIG6[G]
22	SIG5[G]
21	SIG4[G]
20	SIG3[G]
19	SIG2[G]
18	SIG1[G]
17	VSSX
16	NC
15	NC
14	VDDX
13	DX
12	XCLX
11	CLX
10	DIRX
9	ENB2[G]
8	ENB1[G]
7	LCCOM
6	DIRY
5	NRG
4	VDDY
3	XCLY
2	CLY
1	DY

TO LCD GREEN UNIT

C3610 0.1

L3513 22U

R3657 56K

R3658 22K

R3656 150K

R3659 12K

C3608 1

C3609 33/25V

C3611 0.1

GND
VCC1
GND
VCLP2
VCLP1
R DRIVE
HOLD42
HOLD41
HOLD52
HOLD51
HOLD62
HOLD61
VT
FRP
TIME CONST
VREF2
VREF1
GATE PULSE IN
GND
GND

C3540 0.1
C3538 0.1
R3603 47K
C3541 0.1
C3542 0.1
C3543 0.1
C3544 0.1
C3545 0.1
C3546 0.1
C3547 0.1
C3548 0.1
C3549 0.1
R3604 22K
R3598 47K
R3605 12K
C3536 33/25V
C3537 22/6.3V

GND VIN6 GND GND GND GND

R3612 22

L3507 22U
R3614 39K
R3616 18K
C3562 0.1
R3615 22K
R3617 33K
C3563 0.1
C3561 0.1
R3618 47K
C3564 0.1
C3565 0.1
C3566 0.1
C3567 0.1
C3568 0.1
C3569 0.1
C3570 0.1
C3571 0.1
C3572 0.1
R3619 22K
R3613 47K
R3620 12K
C3559 33/25V
C3560 22/6.3V

L3509 22U
R3629 39K
R3631 18K

VDD
VCC
NC
NC
IN1
IN2
IN3
IN4
IN5
IN6
IN7
NC
NC
VSS
VSS1

VDD1
NC
OUT1
OUT2
OUT3
OUT4
/OUT4
OUT5
/OUT5
OUT6
/OUT6
OUT7
/OUT7
NC
VSS1

IC3507 LC4105V-TLM

C3596 0.1
C3597 0.1
C3598 0.1
R3637 22
R3638 22
R3639 22
R3640 22
R3641 22
R3642 22
R3636 22K

C3599 2276.3V
C3600 0.1
C3601 0.1
C3602 0.1
C3603 33/25V
R3644 22
R3645 22
R3646 22
R3647 22
R3643 22K
R3648 22
R3649 22
R3650 22
R3651 22

IC3508 LC4105V-TLM

R3653 56K
R3654 22K
R3652 150K
C3604 1
R3655 12K
C3605 33/25V
C3607 0.1

6	DIAY
5	NAG
4	VDDY
3	XCLY
2	CLY
1	DY

TP3508

P3502

30	DY
29	VSSY
28	VSSY
27	NAS2
26	NAS1
25	LCCOM
24	VSSX
23	SIG6[G]
22	SIG5[G]
21	SIG4[G]
20	SIG3[G]
19	SIG2[G]
18	SIG1[G]
17	VSSX
16	NC
15	NC
14	VDDX
13	DX
12	XCLX
11	CLX
10	DIAX
9	ENB2[G]
8	ENB1[G]
7	LCCOM
6	DIAY
5	NAG
4	VDDY
3	XCLY
2	CLY
1	DY

C3610 0.1
L3513 22U
R3657 56K
R3658 22K
R3656 150K
C3608 1
R3659 12K
C3609 33/25V
C3611 0.1

TO LCD GREEN UNIT

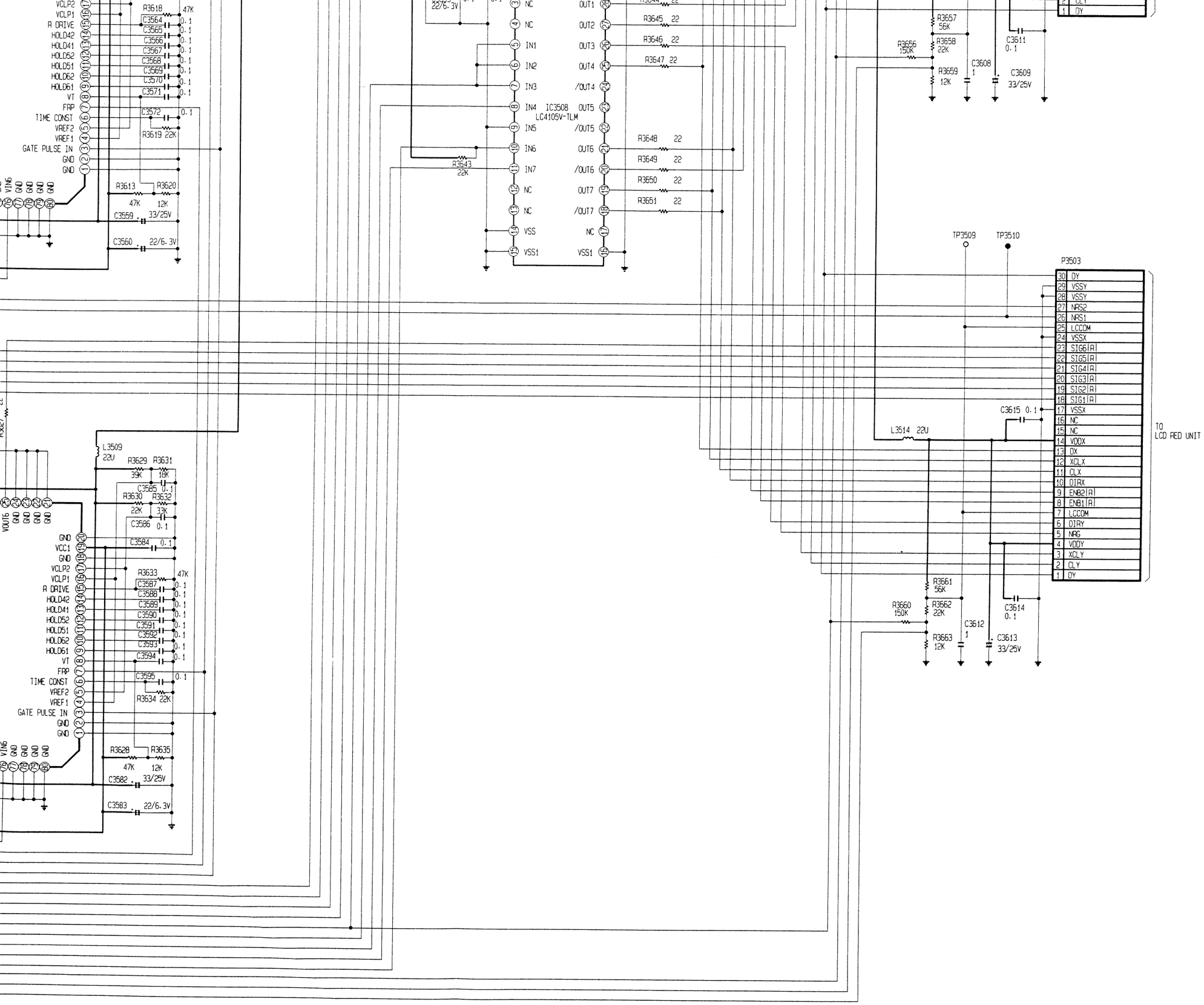
TP3509
TP3510

P3503

30	DY
29	VSSY
28	VSSY
27	NAS2
26	NAS1
25	LCCOM
24	VSSX
23	SIG6[A]
22	SIG5[A]
21	SIG4[A]
20	SIG3[A]
19	SIG2[A]
18	SIG1[A]
17	VSSX
16	NC
15	NC
14	VDDX
13	DX
12	XCLX
11	CLX
10	DIAX

C3615 0.1
L3514 22U

TO LCD RED UNIT


IC3508
LC4105V-TLM
NC
OUT1
NC
OUT2
IN1
OUT3
IN2
OUT4
IN3
/OUT4
IN4
OUT5
IN5
/OUT5
IN6
OUT6
IN7
/OUT6
NC
OUT7
NC
/OUT7
VSS
NC
VSS1
VSS1
R3643 22K
R3644 22
R3645 22
R3646 22
R3647 22
R3648 22
R3649 22
R3650 22
R3651 22
22/6.3V
VCLP2
VCLP1
A DRIVE
HOLD42
HOLD41
HOLD52
HOLD51
HOLD62
HOLD61
VT
FRP
TIME CONST
VREF2
VREF1
GATE PULSE IN
GND
GND
R3618 47K
C3564 0.1
C3565 0.1
C3566 0.1
C3567 0.1
C3568 0.1
C3569 0.1
C3570 0.1
C3571 0.1
C3572 0.1
R3619 22K
R3613 47K
R3620 12K
C3559 33/25V
C3560 22/6.3V
R3657 56K
R3658 22K
R3656 150K
R3659 12K
C3608 1
C3609 33/25V
C3611 0.1
P3503
30 DY
29 VSSY
28 VSSY
27 NRS2
26 NRS1
25 LCCOM
24 VSSX
23 SIG6[A]
22 SIG5[A]
21 SIG4[A]
20 SIG3[A]
19 SIG2[A]
18 SIG1[A]
17 VSSX
16 NC
15 NC
14 VDDX
13 DX
12 XCLX
11 CLX
10 DIRX
9 ENB2[A]
8 ENB1[A]
7 LCCOM
6 DIRY
5 NRG
4 VDDY
3 XCLY
2 CLY
1 DY
TO
LCD RED UNIT
TP3509
TP3510
C3615 0.1
L3514 22U
R3661 56K
R3662 22K
R3660 150K
R3663 12K
C3612 1
C3613 33/25V
C3614 0.1
L3509 22U
R3629 39K
R3631 16K
C3585 0.1
R3630 22K
R3632 33K
C3586 0.1
C3584 0.1
R3633 47K
C3587 0.1
C3588 0.1
C3589 0.1
C3590 0.1
C3591 0.1
C3592 0.1
C3593 0.1
C3594 0.1
C3595 0.1
R3634 22K
R3628 47K
R3635 12K
C3582 33/25V
C3583 22/6.3V

SYSTEM CONTROL SCHEMATIC DIAGARM

INFRARED SENSOR FRONT C.B.A.
(LSEPOA10A1)

U6801 PNA4611M00XD
IR RECEIVER
VCC GND OUT
C6801 47/6.3V
P6801
UNSW5V 1
GND 2
IR_F 3
P6001
UNSW5V 1
AGND 2
IR-F 3
AGND
U6001 GP1U292Q
IR RECEIVER
GND VCC OUT
IR_R
C6001 47/6.3V
AGND

TO DIGITAL < 35 PRO_CS — R6002 100
TO CARD < 36 SD_SCK_3 — R6004 100
TO DIGITAL < 37 SD_SCK_4
TO DIGITAL < 38 SD_DATA_3
TO CARD < 39 SD_DATA_3 — R6005 100
TO DIGITAL < 40 TG_CS — R6003 100
TO CARD < 41 CARD_CS — R6006 100
TO DIGITAL < 42 TG_VS — R6130 22
TO DIGITAL < 43 TG_HS — R6131 22
TO DIGITAL < 44 SW3.3V — L6007 VLPS0090

C6002 0.01
C6003 47/6.3V
IC6001 74VHC14MTCX
GND
VCC

C6044 0.01
C6045 47/6.3V
IC6008 74VHC14MTCX
GND
VCC
AGND

TO INPUT < 45 SYS_HS
TO INPUT < 46 SYS_VS
TO LCD DRIVE < 47 DAC1_CS
TO LCD DRIVE < 12 DAC2_CS

THERMISTOR C.B.A.
(LSEPOA11A1)

P6402
THERMO1 1
THERMO2 2
P6002
THERMO_1 1
THERMO_2 2

L6004 4.7U
R6064 47K
AGND
D6021 RD6.2S
D6022 RD6.2S
R6046 56
R6049 56
R6055 56
R6056 56
C6021 0.1
C6022 47/6.3V
IC6004 AT24C02NSCTL
IC6005 AT24C02NSCTL
VDD WP SCL SDA
A0 A1 A2 GND
EEPROM1
EEPROM2

R6025 47K
R6037 47K
R6039 47K
R6132 47K
ANA-5V

R6027 1K
R6028 1K
R6029 1K
R6030 1K
R6031 1K
R6032 1K
R6033 100
L6003 0

C6016 0.1
C6017 100/6.3V
R6042 33K
R6050 33K
C6024 1

IR_R
26 SYS_HS
27 MOUSE_RESET
28 SYS_VS
29 MOUSE_SUPPLY
30 DAC1_CS
31 DAC2_CS
32 MOUSE_OUT0
33 MOUSE_OUT1
34 MOUSE_IN0
35 MOUSE_IN1
36 AVREF
37 AVCC

C6001 47/6.3V
AGND

C6002 0.01
C6003 47/6.3V
IC6001 74VHC14MTCX

TO DIGITAL < 35 PRO_CS — R6002 100
TO CARD < 36 SO_SCK_3 — R6004 100
TO DIGITAL < 37 SO_SCK_3
38 SO_DATA_3
TO CARD < 39 SO_DATA_3 — R6005 100
TO DIGITAL < 40 TG_CS — R6003 100

C6044 0.01
C6045 47/6.3V
IC6008 74VHC14MTCX

TO CARD < 41 CARD_CS — R6006 100
42 TG_VS — R6130 22
TO DIGITAL
43 TG_HS — R6131 22
44 SW3.3V — L6007 VLPS0090

AGND

TO INPUT
45 SYS_HS
46 SYS_VS
47 DAC1_CS
TO LCD DRIVE < 12 DAC2_CS

THERMISTOR C.B.A.
(LSEP0A11A1)

P6402
R6402 VRTS0013
THERMO1
THERMO2
P6002
THERMO_1
THERMO_2

FILTER SW UNIT
(LSJA0235)
P6004
FILTER_OPEN_H
AGND

TO VIDEO < 48 S1_5V
TO LCD DRIVE < 49 INTLACE
TO INPUT
50 DAC3_CS
51 D_POWER_ON_H
52 POWER_ON_H
53 L_ON_H
TO DIGITAL < 55 D_POWER_ON_H

1	TXD
2	XA/CLK_OUT/SD_OUT
3	XB/D_OUT
4	YA
5	YB
6	SW_L
7	RDY
8	SW_R
9	GND
10	SEL_GND
11	SEL0
12	SEL1
13	MOUSE_SUPPLY

JK6001 LSJA0128
MOUSE

FL6001 LSLFAA1H102
FL6002 LSLFAA1H102
FL6003 LSLFAA1H102
FL6004 LSLFAA1H102
FL6005 LSLFAA1H102
FL6006 LSLFAA1H102
FL6007 LSLFAA1H102
D6003 RD6.2S
D6004 RD6.2S
D6005 RD13S
D6006 RD13S
D6007 RD6.2S
D6008 RD6.2S
D6009 RD6.2S

R6014 680
C6005 1000P
R6017 1K
R6018 47K
Q6003 2SD1819A
R6021 2200
Q6004 2SD1819A
MA142WK D6019
R6020 47K
R6019 22K
MA142WK D6018
AGND

R6015 100
R6016 100
R6012 100

R6064 47K
AGND
L6004 4.7U
D6021 RD6.2S
D6022 RD6.2S
R6046 56
R6049 56
R6055 56
R6056 56
C6021 0.1
C6022 47/6.3V

IC6004 AT24C02NSCTL
IC6005 AT24C02NSCTL
VDD WP SCL SDA
A0 A1 A2 GND
EEPROM1
EEPROM2

R6025 47K
R6037 47K
R6039 47K
R6132 47K

R6027 1K
R6028 1K
R6029 1K
R6030 1K
R6031 1K
R6032 1K
R6033 100
L6003 0

R6042 33K
C6016 0.1
C6017 100/6.3V
R6050 33K
C6024 1
ANA-5V

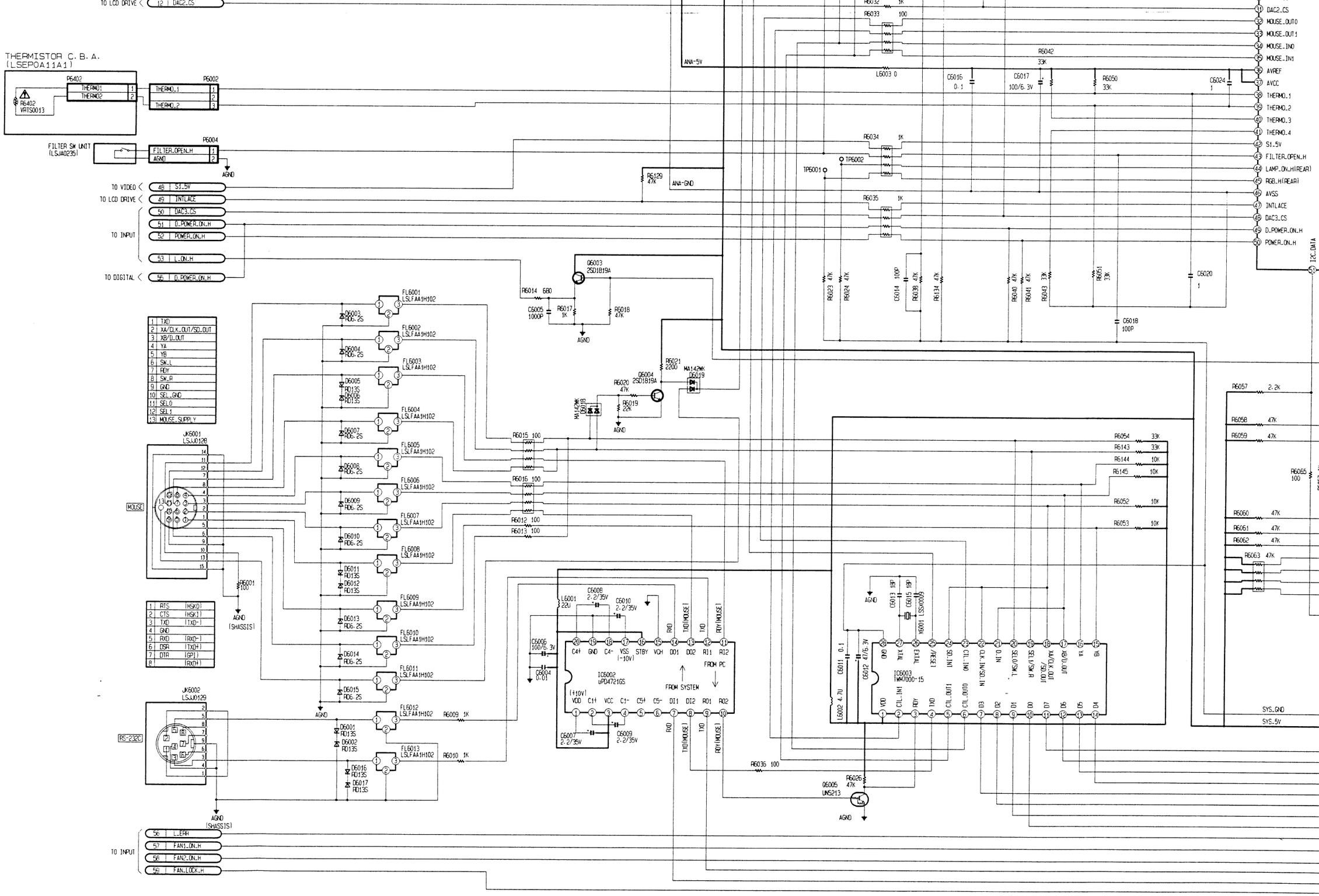
R6034 1K
R6035 1K
TP6001
TP6002
R6129 47K
ANA-GND

R6023 47K
R6024 47K
C6014 100P
R6038 47K
R6134 47K
R6040 47K
R6041 47K
R6043 33K
R6051 33K
C6020 1
C6018 100P

R6054 33K
R6143 33K
R6144 10K
R6145 10K
R6052 10K

R6057 2.2K
R6058 47K
R6059 47K
R6065 100
R6060 47K

1 IIC
25 SYS_HS
26 MOUSE_RESET
27 SYS_VS
28 MOUSE_SUPPLY
29 DAC1_CS
30 DAC2_CS
31 MOUSE_OUT0
32 MOUSE_OUT1
33 MOUSE_IN0
34 MOUSE_IN1
35 AVREF
36 AVCC
37 THERMO_1
38 THERMO_2
39 THERMO_3
40 THERMO_4
41 S1_5V
42 FILTER_OPEN_H
43 LAMP_ON_H(REAR)
44 RGB_H(REAR)
45 AVSS
46 INTLACE
47 DAC3_CS
48 D_POWER_ON_H
49 POWER_ON_H
50 IIC_DATA

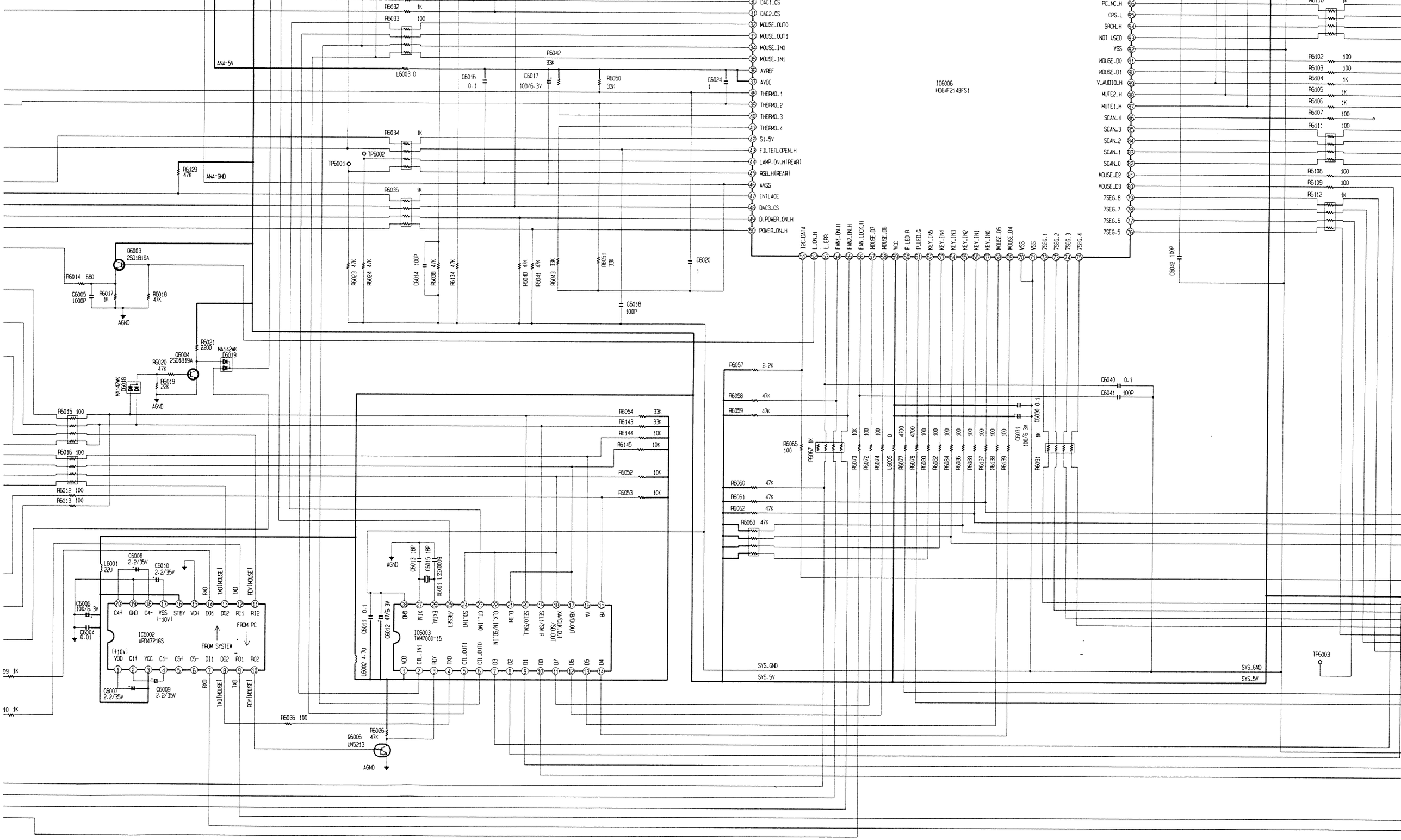

THERMISTOR C.B.A.
(LSEP0A11A1)
P6402
THERM01
THERM02
R6402
VRTS0013
P6002
THERMO_1
THERMO_2
FILTER SW UNIT
(LSJA0235)
P6004
FILTER_OPEN_H
AGND
TO VIDEO
TO LCD DRIVE
TO INPUT
TO DIGITAL
48 S1_5V
49 INTLACE
50 DAC3_CS
51 D_POWER_ON_H
52 POWER_ON_H
53 L_ON_H
55 D_POWER_ON_H
TO LCD DRIVE 12 DAC2_CS
ANA-5V
ANA-GND
R6129 47K
R6032 1K
R6033 100
L6003 0
R6042 33K
C6016 0.1
C6017 100/6.3V
R6050 33K
C6024 1
R6034 1K
R6035 1K
TP6002
TP6001
R6023 47K
R6024 47K
C6014 100P
R6038 47K
R6134 47K
R6040 47K
R6041 47K
R6043 33K
R6051 33K
C6020 1
C6018 100P
1 TXD
2 XA/CLK_OUT/SD_OUT
3 XB/D_OUT
4 YA
5 YB
6 SW_L
7 RDY
8 SW_R
9 GND
10 SEL_GND
11 SEL0
12 SEL1
13 MOUSE_SUPPLY
JK6001
LSJJ0128
MOUSE
R6001 100
AGND (SHASSIS)
1 RTS (HSKO)
2 CTS (HSKI)
3 TXD (TXD-)
4 GND
5 RXD (RXD-)
6 DSR (TXD+)
7 DTR (GPI)
8 (RXD+)
JK6002
LSJJ0129
RS-232C
AGND (SHASSIS)
TO INPUT
56 L_ENH
57 FAN1_ON_H
58 FAN2_ON_H
59 FAN_LOCK_H
Q6003 2SD1819A
R6014 680
C6005 1000P
R6017 1K
R6018 47K
AGND
Q6004 2SD1819A
R6021 220Ω
MA142WK D6019
R6020 47K
R6019 22K
MA142WK D6018
AGND
FL6001 LSLFAA1H102
FL6002 LSLFAA1H102
FL6003 LSLFAA1H102
FL6004 LSLFAA1H102
FL6005 LSLFAA1H102
FL6006 LSLFAA1H102
FL6007 LSLFAA1H102
FL6008 LSLFAA1H102
FL6009 LSLFAA1H102
FL6010 LSLFAA1H102
FL6011 LSLFAA1H102
FL6012 LSLFAA1H102
FL6013 LSLFAA1H102
D6003 RD6.2S
D6004 RD6.2S
D6005 RD13S
D6006 RD13S
D6007 RD6.2S
D6008 RD6.2S
D6009 RD6.2S
D6010 RD6.2S
D6011 RD13S
D6012 RD13S
D6013 RD6.2S
D6014 RD6.2S
D6015 RD6.2S
D6001 RD13S
D6002 RD13S
D6016 RD13S
D6017 RD13S
R6015 100
R6016 100
R6012 100
R6013 100
R6009 1K
R6010 1K
L6001 22U
C6008 2.2/35V
C6010 2.2/35V
C6006 100/6.3V
C6004 0.01
C6007 2.2/35V
C6009 2.2/35V
IC6002 μPD4721GS
(+10V)
VDD C1+ VCC C1- C5+ C5- DI1 DI2 RO1 RO2
C4+ GND C4- VSS (-10V) STBY VCH DO1 DO2 RI1 RI2
RXD TXD(MOUSE) TXD RDY(MOUSE)
FROM PC
FROM SYSTEM
R6035 100
R6026 47K
Q6005 UN5213
AGND
R6057 2.2K
R6058 47K
R6059 47K
R6065 100
R6054 33K
R6143 33K
R6144 10K
R6145 10K
R6052 10K
R6053 10K
R6060 47K
R6061 47K
R6062 47K
R6063 47K
AGND
C6013 18P
C6015 18P
X6001 15.93MHz
C6011 0.1
C6012 47/6.3V
L6002 4.70
IC6003 HM7000-15
XTAL EXT
SEL1/SW1
SEL0/SW2
XA/CLK/SD_OUT
XB/D_OUT
SD_IN1
CTL_IN0
CLK_IN/SD_IN
D_IN
SEL0/SW1
SEL1/SW2
SD_OUT1
CTL_OUT0
D3 D2 D1 D0 D7 D6 D5 D4
SYS_GND
SYS_5V
I2C_DATA

IMPORTAN
COMPONEN
SPECIAL
WHEN REP
ONLY THE

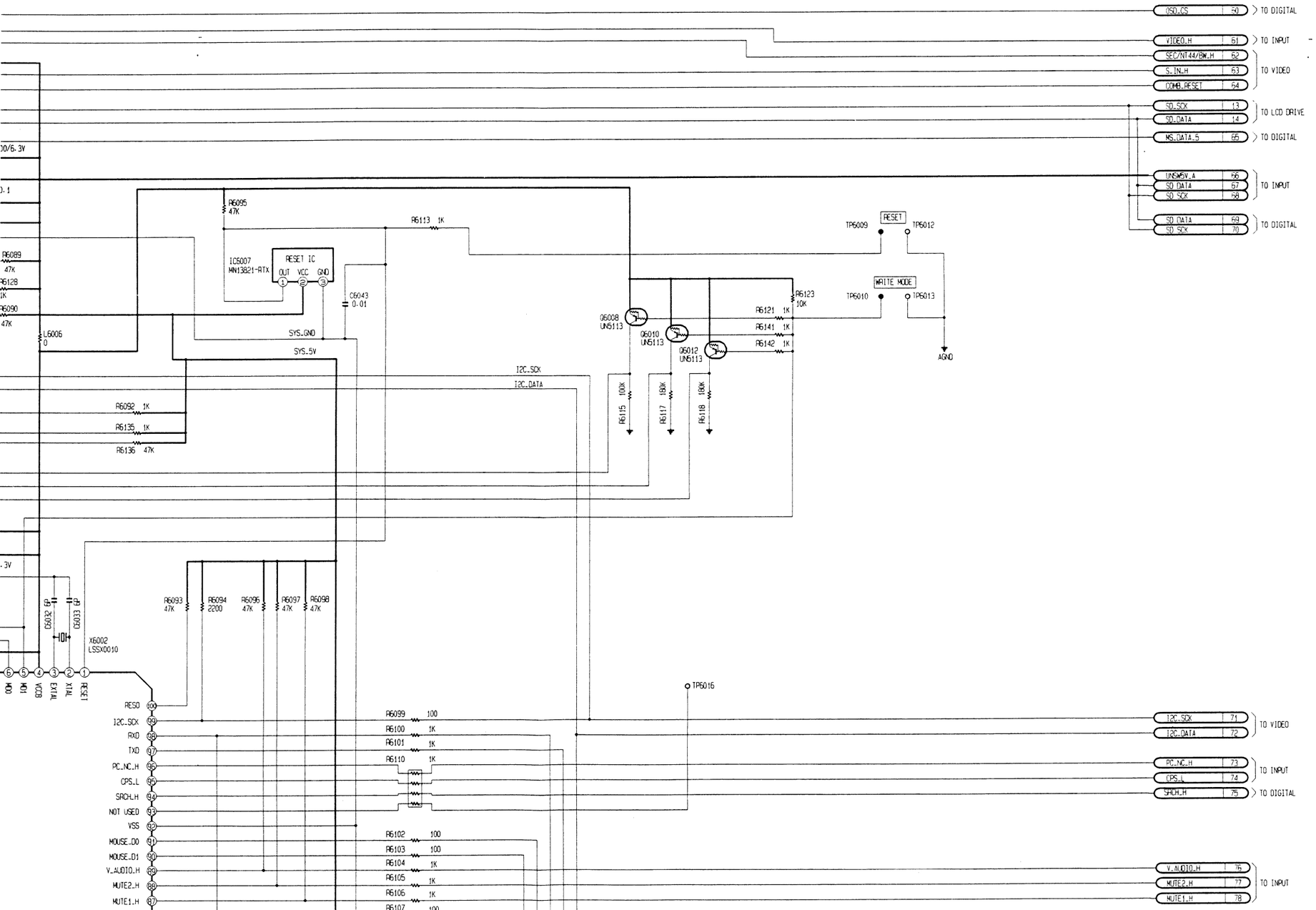
AGND
C6028 100/6.3V
C6029 0.1
R6095 47K
R6113 1K
R6064 47K
R6089 47K
R6128 1K
R6090 47K
IC6007 MN13821-RTx
RESET IC
OUT VCC GND
C6043 0.01
SYS_GND
SYS_5V
L6004 4.7U
L6006 0
R6066 1K
R6068 1K
R6069 1K
R6071 100
R6073 1K
R6075 22K
R6076 1K
R6079 100
R6081 100
R6083 100
R6085 1K
R6087 1K
D6021 RD6.2S
D6022 RD6.2S
R6046 56
R6049 56
R6055 56
R6056 56
C6021 0.1
C6022 47/6.3V
R6092 1K
R6135 1K
R6136 47K
C6026 0.1
C6027 100/6.3V
C6025 0.1
C6032 CP
C6033 CP
X6002 LSSX0010
R6093 47K
R6094 2200
R6096 47K
R6097 47K
R6098 47K
IC6004 AT24C02NSCTL
IC6005 AT24C02NSCTL
EEPROM1
EEPROM2
R6025 47K
R6037 47K
R6039 47K
R6132 47K
IC6006 HD64F214BFS1
R6027 1K
R6028 1K
R6029 1K
R6030 1K
R6031 1K
R6032 1K
R6033 100
R6042 33K
L6003 0
C6016 0.1
C6017 100/6.3V
R6050 33K
C6024 1
R6034 1K
R6035 1K
TP6002
TP6001
R6129 47K
ANA-5V
ANA-GND
R6099 100
R6100 1K
R6101 1K
R6110 1K
R6102 100
R6103 100
R6104 1K
R6105 1K
R6106 1K
R6107 100
R6111 100
R6108 100
R6109 100
R6112 1K

25	IR_A	100	RES0
24	IR_F	99	I2C_SCK
23	SYS_VS	98	RXD
22	NTSC/N4.4L	97	TXD
21	OSD_CS	96	PC_NC_H
20	CARD_CS	95	CPS_L
19	VIDEO_H	94	SACH_H
18	SECAM/4.4PAL_H	93	NOT USED
17	S_IN_H	92	VSS
16	COMB_RESET	91	MOUSE_D0
15	VSS	90	MOUSE_D1
14	SD_DATA	89	V_AUDIO_H
13	M6_DATA	88	MUTE2_H
12	SD_SCK	87	MUTE1_H
11	/T6_CS	86	SCAN_4
10	/FRD_CS	85	SCAN_3
9	VCC	84	SCAN_2
8	STBY	83	SCAN_1
7	NMI	82	SCAN_0
6	MD0	81	MOUSE_D2
5	MD1	80	MOUSE_D3
4	VCCB	79	7SEG_8
3	EXTAL	78	7SEG_7
2	XTAL	77	7SEG_6
1	RESET		

26	SYS_HS
27	MOUSE_RESET
28	SYS_VS
29	MOUSE_SUPPLY
30	DAC1_CS
31	DAC2_CS
32	MOUSE_OUT0
33	MOUSE_OUT1
34	MOUSE_IN0
35	MOUSE_IN1
36	AVREF
37	AVCC
38	THERMO_1
39	THERMO_2
40	THERMO_3
41	THERMO_4
42	S1_5V
43	FILTER_OPEN_H
44	LAMP_ON_H(REAR)
45	RGB_H(REAR)
46	AVSS
47	INTLACE
48	DAC3_CS
49	D_POWER_ON_H

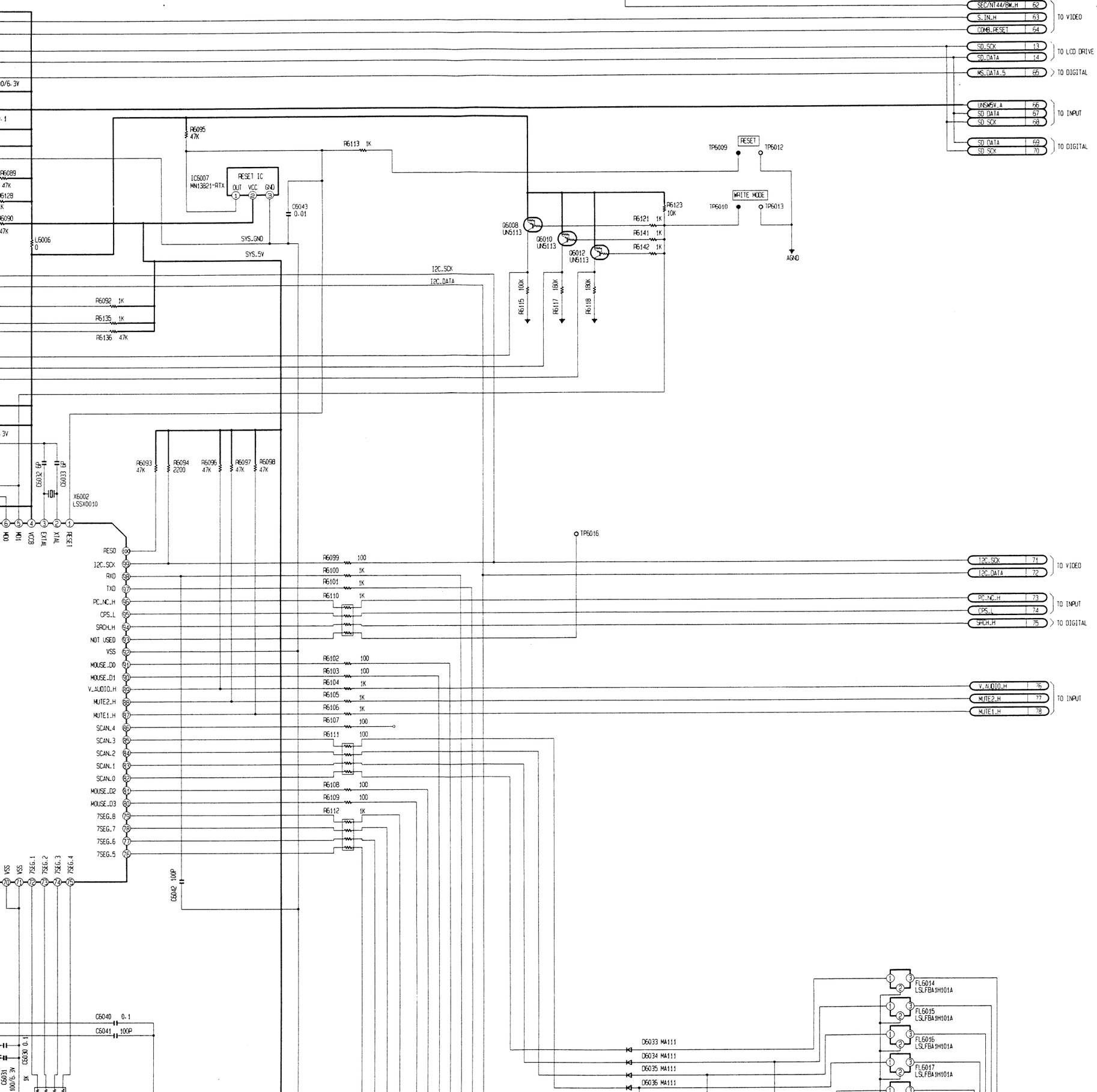

IC6006
HD64F2148BFS1
ANA-5V
ANA-GND
AGND
SYS_GND
SYS_5V
TP6001
TP6002
TP6003
Q6003 2SD1819A
Q6004 2SD1819A
Q6005 UN5213
MA142WK D6018
MA142WK D6019
IC6002 uPD4721GS
IC6003 TMM7000-15
FROM PC
FROM SYSTEM
(+10V)
(-10V)
L6001 22U
L6002 4.7U
L6003 0
X6001 4.000MHz
R6129 47K
R6042 33K
R6050 33K
R6051 33K
C6016 0.1
C6017 100/6.3V
C6018 100P
C6020 1
C6024 1
C6042 100P
C6040 0.1
C6041 100P
C6030 0.1
C6031 100/6.3V
C6004 0.01
C6005 1000P
C6007 2.2/35V
C6008 2.2/35V
C6009 2.2/35V
C6010 2.2/35V
C6011 0.1
C6012 47/6.3V
C6013 18P
C6015 18P
R6014 680
R6017 1K
R6018 47K
R6019 22K
R6020 47K
R6021 2200
R6023 47K
R6024 47K
R6032 1K
R6033 100
R6034 1K
R6035 1K
R6036 100
R6037 47K
R6038 47K
R6039 47K
R6040 47K
R6041 47K
R6043 33K
R6052 10K
R6053 10K
R6054 33K
R6057 2.2K
R6058 47K
R6059 47K
R6060 47K
R6061 47K
R6062 47K
R6063 47K
R6065 100
R6067 1K
R6070 10K
R6072 100
R6074 100
L6005 0
R6077 4700
R6078 4700
R6080 100
R6082 100
R6084 100
R6085 100
R6088 100
R6089 100
R6091 1K
R6102 100
R6103 100
R6104 1K
R6105 1K
R6106 1K
R6107 100
R6108 100
R6109 100
R6111 100
R6112 1K
R6137 100
R6138 100
R6139 100
R6143 33K
R6144 10K
R6145 10K
R6026 47K
R6035 100
R6036 100
R6009 1K
R6010 1K
R6011 1K
R6012 100
R6013 100
R6015 100
R6016 100
PC_NC_H
CPS_L
SRCH_H
NOT USED
VSS
MOUSE_D0
MOUSE_D1
V_AUDIO_H
MUTE2_H
MUTE1_H
SCAN_4
SCAN_3
SCAN_2
SCAN_1
SCAN_0
MOUSE_D2
MOUSE_D3
7SEG_8
7SEG_7
7SEG_6
7SEG_5
TXD(MOUSE)
RXD(MOUSE)
RDY(MOUSE)
DAC1_CS
DAC2_CS
MOUSE_OUT0
MOUSE_OUT1
MOUSE_IN0
MOUSE_IN1
AVREF
AVCC
THERMO_1
THERMO_2
THERMO_3
THERMO_4
S1.5V
FILTER_OPEN_H
LAMP_ON_H(REAR)
RGB_H(REAR)
AVSS
INTLACE
DAC3_CS
D_POWER_ON_H
POWER_ON_H
I2C_DATA
L_ON_H
L_ERR
FAN1_ON_H
FAN2_ON_H
FAN_LOCK_H
MOUSE_D7
MOUSE_D6
VCC
P_LED_R
P_LED_G
KEY_IN5
KEY_IN4
KEY_IN3
KEY_IN2
KEY_IN1
KEY_IN0
MOUSE_D5
MOUSE_D4
VSS
VSS
7SEG_1
7SEG_2
7SEG_3
7SEG_4

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SINE ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE
ONLY THE SPECIFIED PARTS.



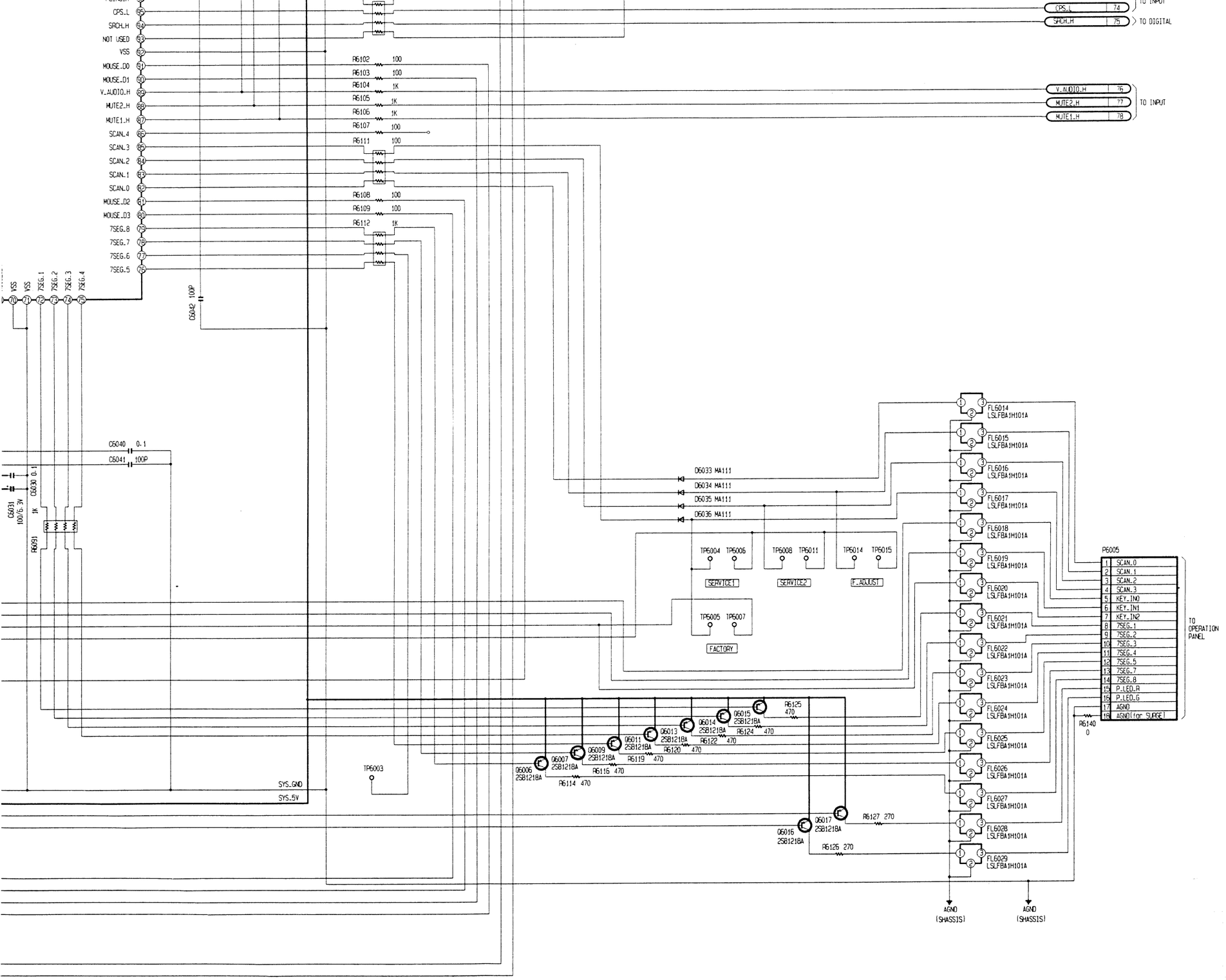
VOLTAGE CHART

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
IC6001		22	0	C	0.1
1	0.7	23	4.8	B	0.6
2	2.9	24	4.7	**Q6005**	
3	4.4	25	4.4	E	0
4	0.4	26	4.3	C	0
5	4.6	27	0	B	5.1
6	0.3	28	4.9	**Q6006**	
7	0	29	0	E	5.2
8	3.0	30	0	C	-0.2
9	0.4	31	0	B	5.1
10	2.9	32	5.1	**Q6007**	
11	0.4	33	5.1	E	5.2
12	0.4	34	5.1	C	-0.5
13	2.9	35	5.1	B	5.1
14	3.3	36	5.2	**Q6008**	
IC6002		37	5.2	E	5.1
1	10.1	38	3.6	C	4.8
2	3.9	39	1.5	B	5.1
3	5.2	40	3.6	**Q6009**	
4	-1.2	41	1.5	E	5.2
5	4.2	42	0	C	0
6	-0.1	43	0	B	5.1
7	5.1	44	0	**Q6010**	
8	5.1	45	0	E	5.1
9	5.2	46	0	C	0
10	5.1	47	0	B	5.1
11	0	48	0	**Q6011**	
12	0	49	5.1	E	5.2
13	-10.0	50	5.1	C	0
14	-10.0	51	4.7	B	5.1
15	0	52	5.1	**Q6012**	
16	5.2	53	5.1	E	5.1
17	-10.0	54	5.1	C	4.3
18	-1.1	55	5.1	B	5.1
19	0	56	0	**Q6013**	
20	4.0	57	0	E	5.2
IC6003		58	0	C	0
1	5.2	59	5.1	B	5.1
2	5.1	60	5.1	**Q6014**	
3	0	61	0	E	5.2
4	5.1	62	5.1	C	0
5	5.1	63	5.1	B	5.1
6	5.1	64	5.1	**Q6015**	
7	0	65	5.1	E	5.2
8	0	66	5.1	C	0
9	0	67	5.1	B	5.1
10	0	68	0	**Q6016**	
11	0	69	0	E	5.2
12	0	70	0	C	5.1
13	0	71	0	B	4.4
14	0	72	5.1	**Q6017**	
15	5.0	73	5.1	E	5.2
16	5.1	74	5.1	C	0
17	5.1	75	5.1	B	5.1
18	5.0	76	5.1		
19	2.4	77	5.1	**P6001**	
20	2.4	78	5.1	1	5.2
21	5.1	79	5.1	2	0
22	5.1	80	0	3	4.7
23	5.1	81	0	**P6002**	
24	5.0	82	5.1	1	3.6
25	0.1	83	5.1	2	0
26	0.7	84	5.1	3	1.5
27	0.7	85	5.1	**P6003**	
28	0	86	5.1	1	5.1
IC6004		87	0	2	0
1	5.2	88	0	**P6004**	
2	0	89	0	1	0
3	0	90	0	2	0
4	0	91	0	**P6005**	
5	4.7	92	0	1	0
6	4.6	93	0	2	0.1
7	0	94	0	3	0.1
8	5.2	95	5.0	4	0.1
IC6005		96	0	5	5.1
1	0	97	5.1	6	5.1
2	5.2	98	5.2	7	5.1
3	0	99	4.6	8	0.1
4	0	100	5.1	9	0.1
5	4.7	**IC6007**		10	0.1
6	4.6	1	5.1	11	0.1
7	0	2	5.2	12	0.1
8	5.2	3	0	13	0.1
IC6006		**IC6008**		14	0.1
1	5.1	1	4.3	15	0.5
2	2.3	2	0.4	16	2.0
3	-	3	4.9	17	0
4	5.1	4	0	18	0
5	5.1	5	4.9		
6	0	6	0.1	**TP6001**	0
7	5.1	7	0	**TP6002**	0
8	5.1	8	3.2	**TP6003**	
9	5.1	9	0.1	**TP6004**	0
10	0.5	10	3.3	**TP6005**	0.1
11	4.6	11	0	**TP6006**	5.1
12	4.4	12	2.9	**TP6007**	5.1

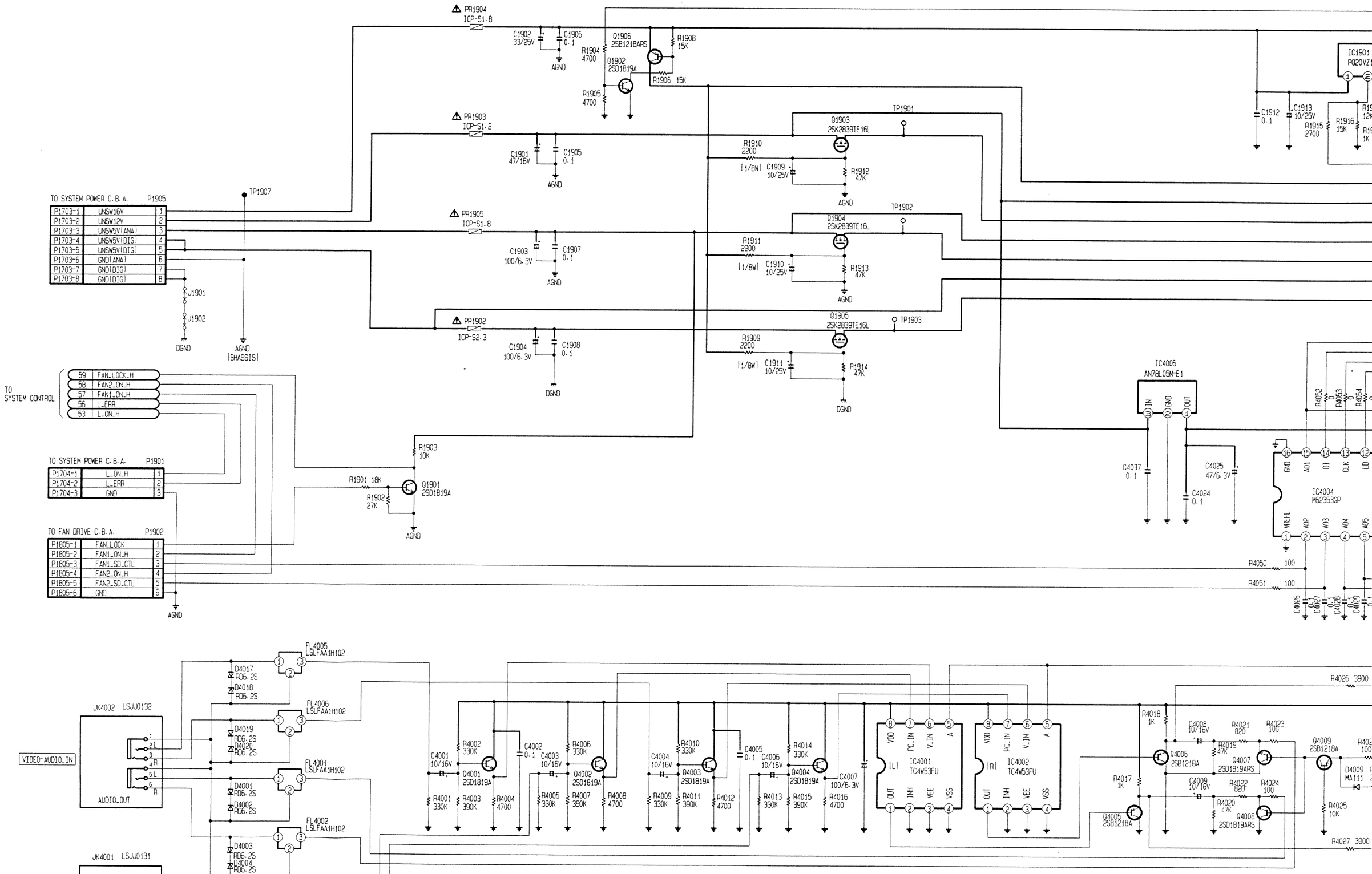


8	5.1	45	0	E	5.1
9	5.2	46	0	C	0
10	5.1	47	0	B	5.1
11	0	48	0	**Q6011**	
12	0	49	5.1	E	5.2
13	-10.0	50	5.1	C	0
14	-10.0	51	4.7	B	5.1
15	0	52	5.1	**Q6012**	
16	5.2	53	5.1	E	5.1
17	-10.0	54	5.1	C	4.3
18	-1.1	55	5.1	B	5.1
19	0	56	0	**Q6013**	
20	4.0	57	0	E	5.2
IC6003		58	0	C	0
1	5.2	59	5.1	B	5.1
2	5.1	60	5.1	**Q6014**	
3	0	61	0	E	5.2
4	5.1	62	5.1	C	0
5	5.1	63	5.1	B	5.1
6	5.1	64	5.1	**Q6015**	
7	0	65	5.1	E	5.2
8	0	66	5.1	C	0
9	0	67	5.1	B	5.1
10	0	68	0	**Q6016**	
11	0	69	0	E	5.2
12	0	70	0	C	5.1
13	0	71	0	B	4.4
14	0	72	5.1	**Q6017**	
15	5.0	73	5.1	E	5.2
16	5.1	74	5.1	C	0
17	5.1	75	5.1	B	5.1
18	5.0	76	5.1		
19	2.4	77	5.1	**P6001**	
20	2.4	78	5.1	1	5.2
21	5.1	79	5.1	2	0
22	5.1	80	0	3	4.7
23	5.1	81	0	**P6002**	
24	5.0	82	5.1	1	3.6
25	0.1	83	5.1	2	0
26	0.7	84	5.1	3	1.5
27	0.7	85	5.1	**P6003**	
28	0	86	5.1	1	5.1
IC6004		87	0	2	0
1	5.2	88	0	**P6004**	
2	0	89	0	1	0
3	0	90	0	2	0
4	0	91	0	**P6005**	
5	4.7	92	0	1	0
6	4.6	93	0	2	0.1
7	0	94	0	3	0.1
8	5.2	95	5.0	4	0.1
IC6005		96	0	5	5.1
1	0	97	5.1	6	5.1
2	5.2	98	5.2	7	5.1
3	0	99	4.6	8	0.1
4	0	100	5.1	9	0.1
5	4.7	**IC6007**		10	0.1
6	4.6	1	5.1	11	0.1
7	0	2	5.2	12	0.1
8	5.2	3	0	13	0.1
IC6006		**IC6008**		14	0.1
1	5.1	1	4.3	15	0.5
2	2.3	2	0.4	16	2.0
3	-	3	4.9	17	0
4	5.1	4	0	18	0
5	5.1	5	4.9		
6	0	6	0.1	**TP6001**	0
7	5.1	7	0	**TP6002**	0
8	5.1	8	3.2	**TP6003**	
9	5.1	9	0.1	**TP6004**	0
10	0.5	10	3.3	**TP6005**	0.1
11	4.6	11	0	**TP6006**	5.1
12	4.4	12	2.9	**TP6007**	5.1
13	1.6	13	0.4	**TP6008**	0
14	0.7	14	3.3	**TP6009**	5.1
15	0			**TP6010**	5.1
16	0	**Q6003**		**TP6011**	5.1
17	0	E	4.5	**TP6012**	0
18	0	C	5.2	**TP6013**	0
19	0	B	5.1	**TP6014**	0
20	4.9	**Q6004**		**TP6015**	5.1
21	4.4	E	0		

1	5.1	1	4.3	15	0.5
2	2.3	2	0.4	16	2.0
3	-	3	4.9	17	0
4	5.1	4	0	18	0
5	5.1	5	4.9		
6	0	6	0.1	**TP6001**	0
7	5.1	7	0	**TP6002**	0
8	5.1	8	3.2	**TP6003**	
9	5.1	9	0.1	**TP6004**	0
10	0.5	10	3.3	**TP6005**	0.1
11	4.6	11	0	**TP6006**	5.1
12	4.4	12	2.9	**TP6007**	5.1
13	1.6	13	0.4	**TP6008**	0
14	0.7	14	3.3	**TP6009**	5.1
15	0			**TP6010**	5.1
16	0	**Q6003**		**TP6011**	5.1
17	0	E	4.5	**TP6012**	0
18	0	C	5.2	**TP6013**	0
19	0	B	5.1	**TP6014**	0
20	4.9	**Q6004**		**TP6015**	5.1
21	4.4	E	0		



INPUT SCHEMATIC DIAGARM



J1902
DGND
AGND (SHASSIS)
PA1902 ICP-S2.3
C1904 100/6.3V
C1908 0.1
DGND
R1909 2200 [1/8W]
C1911 10/25V
2SK2839TE16L
TP1903
R1914 47K
DGND

TO SYSTEM CONTROL

59	FAN_LOCK_H	
58	FAN2_ON_H	
57	FAN1_ON_H	
56	L_ERR	
53	L_ON_H	

TO SYSTEM POWER C.B.A. P1901

P1704-1	L_ON_H	1
P1704-2	L_ERR	2
P1704-3	GND	3

R1903 10K
R1901 18K
R1902 27K
Q1901 2SD1819A
AGND

TO FAN DRIVE C.B.A. P1902

P1805-1	FAN_LOCK	1
P1805-2	FAN1_ON_H	2
P1805-3	FAN1_SD_CTL	3
P1805-4	FAN2_ON_H	4
P1805-5	FAN2_SD_CTL	5
P1805-6	GND	6

AGND

IC4005 AN78L05M-E1 (IN, GND, OUT)
C4037 0.1
C4025 47/6.3V
C4024 0.1
R4052 R4053 0 R4054
IC4004 M62353GP (GND, A01, D1, CLK, LD; WEFL, A02, A03, A04, A05)
R4050 100
R4051 100
C4026 C4027 C4028 C4029

JK4002 LSJJ0132
VIDEO-AUDIO_IN
AUDIO_OUT
FL4005 LSLFAA1H102
FL4006 LSLFAA1H102
FL4001 LSLFAA1H102
FL4002 LSLFAA1H102
FL4003 LSLFAA1H102
FL4004 LSLFAA1H102
D4017 RD6.2S
D4018 RD6.2S
D4019 RD6.2S
D4020 RD6.2S
D4001 RD6.2S
D4002 RD6.2S
D4003 RD6.2S
D4004 RD6.2S
D4005 RD6.2S
D4006 RD6.2S
D4007 RD6.2S
D4008 RD6.2S

JK4001 LSJJ0131
PC-AUDIO_IN

AGND

C4001 10/16V
R4002 330K
Q4001 2SD1819A
C4002 0.1
C4003 10/16V
R4006 330K
Q4002 2SD1819A
C4004 10/16V
R4010 330K
Q4003 2SD1819A
C4005 0.1
C4006 10/16V
R4014 330K
Q4004 2SD1819A
C4007 100/6.3V
R4001 330K
R4003 390K
R4004 4700
R4005 330K
R4007 390K
R4008 4700
R4009 330K
R4011 390K
R4012 4700
R4013 330K
R4015 390K
R4016 4700

IC4001 TC4W53FU [L] (VDD, PC_IN, V_IN, A; OUT, INH, VEE, VSS)
IC4002 TC4W53FU [R] (VDD, PC_IN, V_IN, A; OUT, INH, VEE, VSS)

R4026 3900
R4018 1K
C4008 10/16V
R4021 820
R4023 100
R4019 47K
Q4006 2SB1218A
Q4007 2SD1819ARS
R4017 1K
C4009 10/16V
R4022 820
R4024 100
R4020 47K
Q4008 2SD1819ARS
Q4005 2SB1218A
Q4009 2SB1218A
R4025 10K
D4009 MA111
R4027 3900

RGB IN

RED		1
GREEN		2
BLUE		3
NC		4
CSYNC(MAC2)		5
RED_RETURN		6
GREEN_RETURN		7
BLUE_RETURN		8
NC		9
GND		10
GND		11
(I2C)		12
HSYNC		13
VSYNC		14
(I2C_SCK)		15

JK3001 LSJJ0130

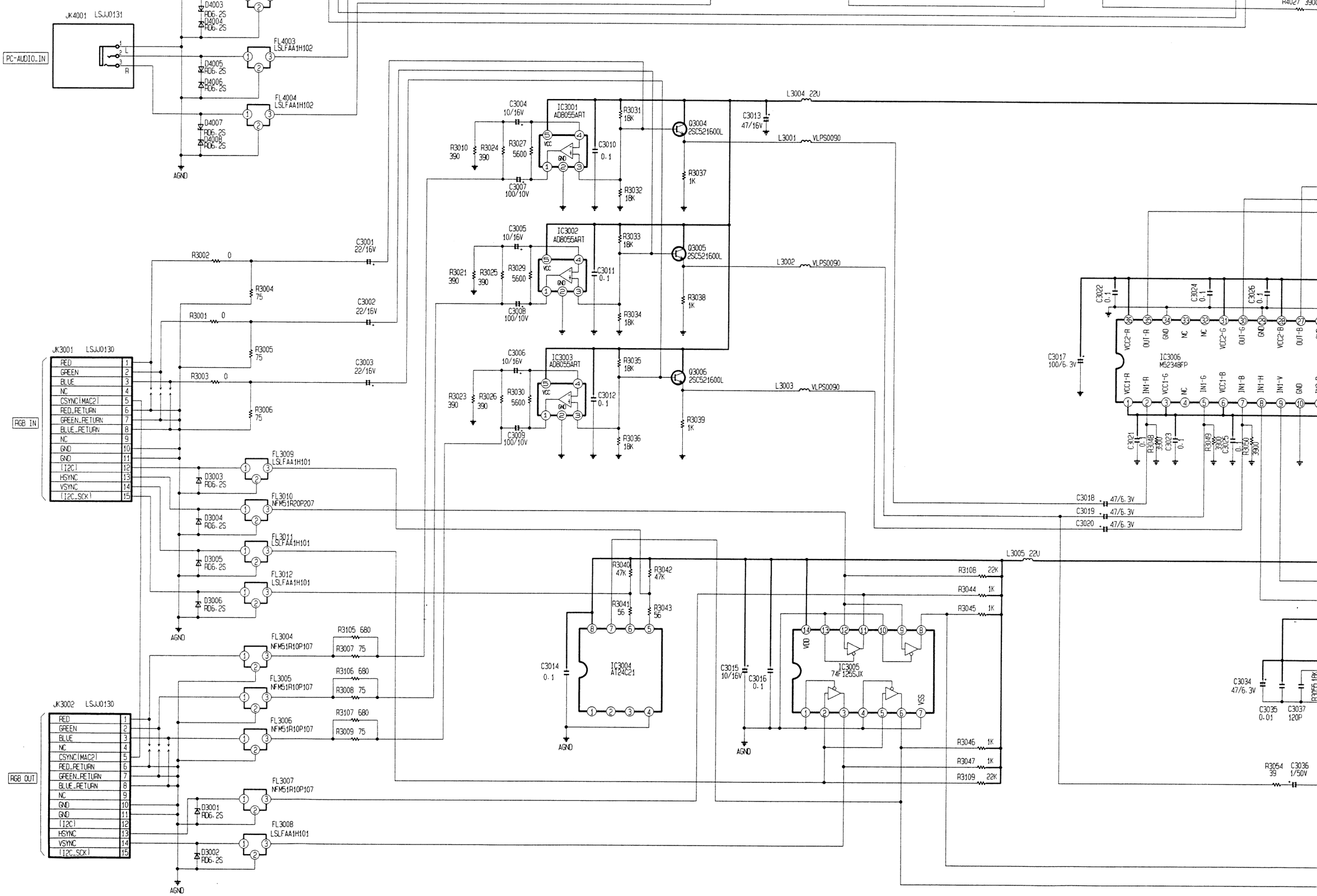
R3002 0
R3004 75
R3001 0
R3005 75
R3003 0
R3006 75
C3001 22/16V
C3002 22/16V
C3003 22/16V
FL3009 LSLFAA1H101
D3003 RD6.2S
FL3010 NFM51R20P207

C3004 10/16V
IC3001 AD8055ART (VCC, GND)
R3031 18K
Q3004 2SC521600L
C3013 47/16V
L3004 22U
L3001 VLPS0090
R3010 390
R3024 390
R3027 5600
C3010 0.1
C3007 100/10V
R3032 18K
R3037 1K

C3005 10/16V
IC3002 AD8055ART (VCC, GND)
R3033 18K
Q3005 2SC521600L
L3002 VLPS0090
R3021 390
R3025 390
R3029 5600
C3011 0.1
C3008 100/10V
R3034 18K
R3038 1K

C3006 10/16V
IC3003 AD8055ART (VCC, GND)
R3035 18K
Q3006 2SC521600L
L3003 VLPS0090
R3023 390
R3026 390
R3030 5600
C3012 0.1
C3009 100/10V
R3036 18K
R3039 1K

C3022 0.1
C3024 0.1
C3026 0.1
IC3006 M52348FP (VCC2-R, OUT-R, GND, NC, NC, VCC2-G, OUT-G, GND, VCC2-B, OUT-B; VCC1-R, IN1-R, VCC1-G, NC, IN1-G, VCC1-B, IN1-B, IN1-H, IN1-V, GND)
C3017 100/6.3V
C3021 0.1
R3048 3900
C3023 0.1
R3049 3900
C3025 0.1
R3050 3900
C3018 47/6.3V


JK4001 LSJJ0131
PC-AUDIO_IN
L
R
AGND
D4003 RD6.2S
D4004 RD6.2S
D4005 RD6.2S
D4006 RD6.2S
D4007 RD6.2S
D4008 RD6.2S
FL4003 LSLFAA1H102
FL4004 LSLFAA1H102
JK3001 LSJJ0130
RGB IN
RED
GREEN
BLUE
NC
CSYNC(MAC2)
RED_RETURN
GREEN_RETURN
BLUE_RETURN
NC
GND
GND
(I2C)
HSYNC
VSYNC
(I2C_SCK)
R3002 0
R3001 0
R3003 0
R3004 75
R3005 75
R3006 75
C3001 22/16V
C3002 22/16V
C3003 22/16V
FL3009 LSLFAA1H101
FL3010 NFM51R20P207
FL3011 LSLFAA1H101
FL3012 LSLFAA1H101
D3003 RD6.2S
D3004 RD6.2S
D3005 RD6.2S
D3006 RD6.2S
IC3001 AD8055ART
IC3002 AD8055ART
IC3003 AD8055ART
C3004 10/16V
C3005 10/16V
C3006 10/16V
R3010 390
R3024 390
R3027 5600
C3007 100/10V
R3021 390
R3025 390
R3029 5600
C300B 100/10V
R3023 390
R3026 390
R3030 5600
C3009 100/10V
C3010 0.1
C3011 0.1
C3012 0.1
R3031 18K
R3032 18K
R3033 18K
R3034 18K
R3035 18K
R3036 18K
Q3004 2SC521600L
Q3005 2SC521600L
Q3006 2SC521600L
R3037 1K
R3038 1K
R3039 1K
C3013 47/16V
L3004 22U
L3001 VLPS0090
L3002 VLPS0090
L3003 VLPS0090
C3022 0.1
C3024 0.1
C3026 0.1
C3017 100/6.3V
IC3006 M52348FP
VCC2-R
OUT-R
GND
NC
NC
VCC2-G
OUT-G
GND
VCC2-B
OUT-B
VCC1-R
IN1-R
VCC1-G
NC
IN1-G
VCC1-B
IN1-B
IN1-H
IN1-V
GND
C3021 0.1
R3048 3900
C3023 0.1
R3049 3900
C3025 0.1
R3050 3900
C3018 47/6.3V
C3019 47/6.3V
C3020 47/6.3V
L3005 22U
R3108 22K
R3044 1K
R3045 1K
R3046 1K
R3047 1K
R3109 22K
R3040 47K
R3042 47K
R3041 56
R3043 56
IC3004 AT24C21
C3014 0.1
IC3005 74F125SJX
VDD
VSS
C3015 10/16V
C3016 0.1
C3034 47/6.3V
C3035 0.01
C3037 120P
R3054 99
C3036 1/50V
JK3002 LSJJ0130
RGB OUT
R3105 680
R3007 75
R3106 680
R3008 75
R3107 680
R3009 75
FL3004 NFM51R10P107
FL3005 NFM51R10P107
FL3006 NFM51R10P107
FL3007 NFM51R10P107
FL300B LSLFAA1H101
D3001 RD6.2S
D3002 RD6.2S

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SINE ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE
ONLY THE SPECIFIED PARTS.

POWER ON H FROM MCON
UNSW 16V AUDIO
SW 15.3V VIDEO
UNSW 12V
SW 12V
UNSW 5V ANALOG
SW 5V ANALOG
NO_PROTECTED_5V
SW 5V DIGITAL

IC1901
PQ20VZ1U
TP1904
TP1908
C1912 0.1
C1913 10/25V
R1915 2700
R1916 15K
R1917 12K
R1918 1K
C1914 10/25V
C1915 0.1

IC4005
AN78L05M-E1
IN GND OUT
C4037 0.1
C4024 0.1
C4025 47/6.3V

IC4004
M62353GP
DAC1
GND A01 D1 CLK LD D0 A08 VCC
VREFL A02 A03 A04 A05 A06 A07 VREFU
R4052 0
R4053 0
R4054 0
R4055 27K
C4032 0.1
C4033 0.1
R4056 820
R4057 100
R4058 100
R4059 100
R4050 100
R4051 100
C4026 0.1
C4027 0.1
C4028 0.1
C4029 0.1
C4030 0.1
C4031 0.1

IC4003 AN5265
DC_VOLUME CONTROL
OUTPUT_AMP
VCC1 GND VCC2
R4034 220 [1/4W]
R4035 220 [1/4W]
D4010 MA8120-M
C4012 47/16V
R4040 82K
C4015 0.033
C4015 10/16V
C4016 4.7/25V
C4014 10/16V
C4022 220/25V
R4049 10
C4023 470/25V
TP4001
R4042 5600
R4045 10K
R4048 10 [1/4W]
C4018 10/16V
R4041 390
C4021 0.047

Q4018 2SD1119
D4015 SFPM-52V
D4016 SFPM-52V
R4068 100
Q4019 2SB1219A
R4070 47K
R4065 4700
C4036 330/25V
Q4069 47K
Q4020 2SD1819A
R4072 47K
R4071 47K

IC4002
TC4W53FU
[R]
VDD PC_IN V_IN A
OUT INH VEE VSS

R4026 3900
L4001 270U
R4018 1K
C4008 10/16V
R4021 820
R4023 100
Q4006 2SB1218A
R4019 47K
Q4007 2SD1819ARS
Q4009 2SB1218A
R4028 100
D4009 MA111
R4029 2200
R4017 1K
C4009 10/16V
R4022 820
R4024 100
R4020 47K
Q4008 2SD1819ARS
Q4005 2SB1218A
R4025 10K
R4027 3900
Q4011 2SD1819A
Q4010 2SD1819A
R4030 2700
C4010 10/16V
R4032 1K

Q4013 UN5215
Q4014 2SB1218A
Q4012 UN5215
R4033 220K
C4011 5600P
R4036 10K
D4013 MA111
R4046 120K
D4014 MA111
R4043 1K
C4017 100/16V
Q4015 2SB1218A
R4047 120K
C4020 2.2/35V

R4060 5600
L4003 22U
C4034 10/16V
R4063 10K
R4066 5600
C4035 0.1
Q4017 2SD1819A
Q4016 2SB1218A
R4061 68K
R4062 18K
R4064 10K
R4067 10K

SW 12V

UNSW 5V ANALOG

SW 5V ANALOG

NO_PROTECTED_5V

SW 5V DIGITAL

IC4005
AN78L05M-E1
IN GND OUT

C4037 0.1
C4024 0.1
C4025 47/6.3V

IC4004
M62353GP
DAC1
GND A01 DI CLK LD DO A08 VCC
VREFL A02 A03 A04 A05 A06 A07 VREFU

R4052 0
R4053 0
R4054 0
R4055 27K
C4032 0.1
C4033 0.1

R4050 100
R4051 100
R4056 820
R4057 100
R4058 100
R4059 100

C4026 0.1
C4027 0.1
C4028 0.1
C4029 0.1
C4030 0.1
C4031 0.1

IC4003 AN5265
DC_VOLUME CONTROL
OUTPUT_AMP
VCC1 GND VCC2

R4034 220 1/4W
R4035 220 1/4W
D4010 MA8120-M
C4012 47/16V
R4049 10
C4022 220/25V
R4040 82K
C4015 10/16V
C4016 4.7/25V
C4019 0.033
R4042 5600
R4045 10K
R4048 10 1/4W
C4021 0.047
C4018 10/16V
R4041 390
C4023 470/25V
TP4001
C4014 10/16V

Q4018 2SD1119
D4015 SFPM-52V
D4016 SFPM-52V
R4068 100
Q4019 2SB1219A
R4070 47K
R4065 4700
C4036 330/25V
R4069 47K
R4072 47K
Q4020 2SD1819A
R4071 47K

R4026 3900
L4001 270U
R4018 1K
C4008 10/16V
R4021 820
R4023 100
Q4009 2SB1218A
R4028 100
Q4010 2SD1819A
Q4011 2SD1819A
C4010 10/16V
R4032 1K
R4030 2700
D4009 MA111
R4029 2200
R4025 10K
R4027 3900

IC4002
TC4W53FU
VDD PC_IN V_IN A
OUT INH VEE VSS

R4017 1K
C4009 10/16V
R4022 820
R4024 100
R4019 47K
Q4006 2SB1218A
Q4007 2SD1819ARS
R4020 47K
Q4008 2SD1819ARS
Q4005 2SB1218A

Q4013 UN5215
Q4014 2SB1218A
Q4012 UN5215
R4033 220K
C4011 5600P
R4036 10K
D4013 MA111
R4046 120K
D4014 MA111
R4043 1K
C4017 100/16V
Q4015 2SB1218A
R4047 120K
C4020 2.2/35V
R4038 2200
D4012 MA142WK

L4003 22U
R4060 5600
R4063 10K
R4066 5600
C4034 10/16V
C4035 0.1
Q4017 2SD1819A
Q4016 2SB1218A
R4061 68K
R4062 18K
R4064 10K
R4067 10K

TP3001 TP3002

R3080 39
R3081 39
R3082 39

C3051 1
C3052 1
C3053 1

L3009 10U
L3006 10U

L3007 22U

C3022 0.1
C3024 0.1
C3026 0.1
C3027 0.1
C3017 100/6.3V

IC3006
M62348FP
VCC2-R OUT-R GND NC NC VCC2-G OUT-G GND VCC2-B OUT-B GND OUT-G-SYNC VCC NC OUT-H OUT-V GND SW
VCC1-R IN1-R VCC1-G NC IN1-G VCC1-B IN1-B IN1-H IN1-V GND IN2-R GND IN2-G NC GND IN2-B IN2-H IN2-V

C3030 0.1

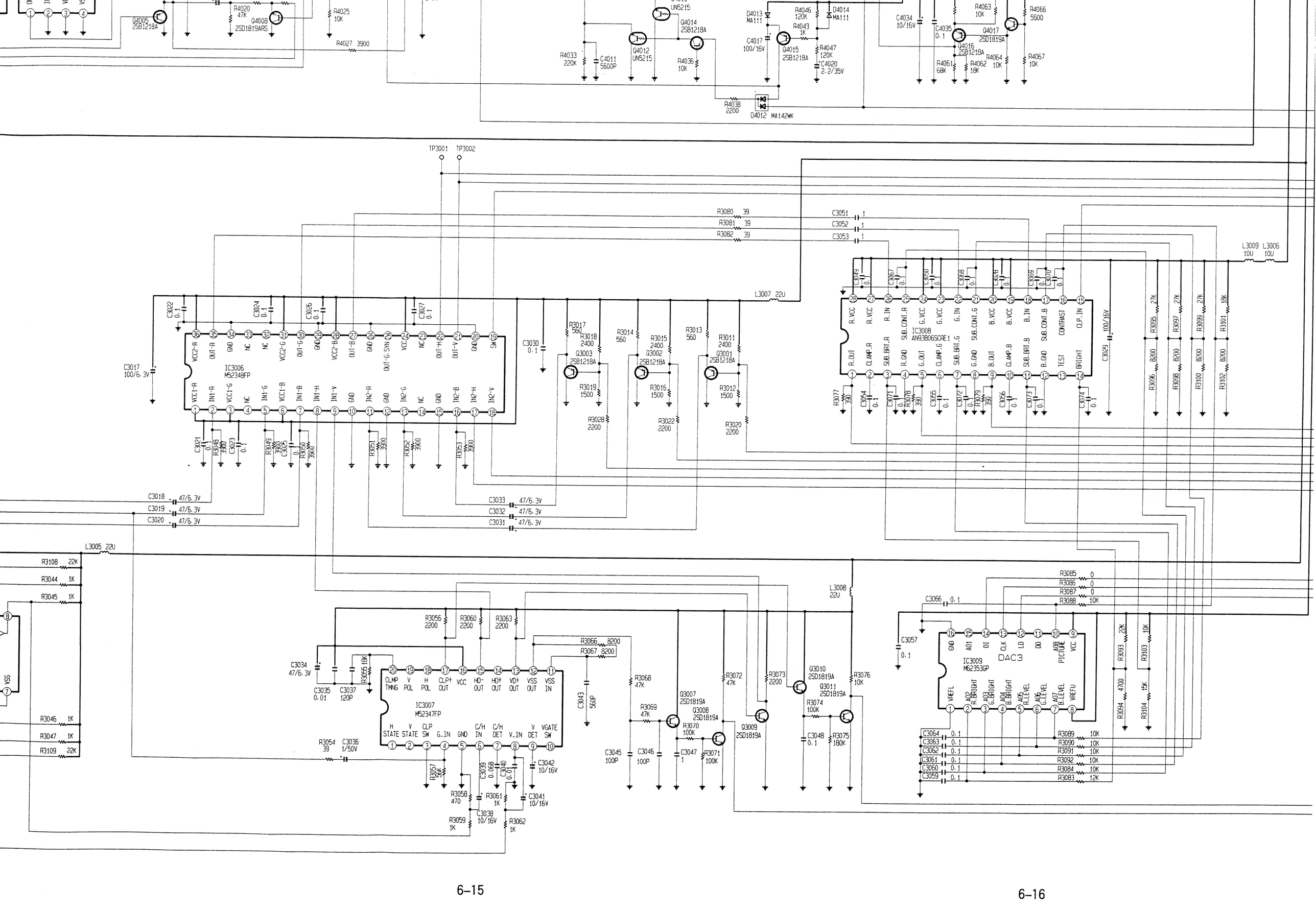
R3017 560
R3018 2400
Q3003 2SB1218A
R3019 1500
R3014 560
R3015 2400
Q3002 2SB1218A
R3016 1500
R3013 560
R3011 2400
Q3001 2SB1218A
R3012 1500

IC3008
AN93B06SCRE1
R.VCC R.IN G.VCC G.IN B.VCC B.IN CONTPAST CLP_IN
R.OUT CLAMP_R SUB.BRT_R R.GND G.OUT CLAMP_G SUB.BRT_G G.GND B.OUT CLAMP_B SUB.BRT_B B.GND TEST BRIGHT

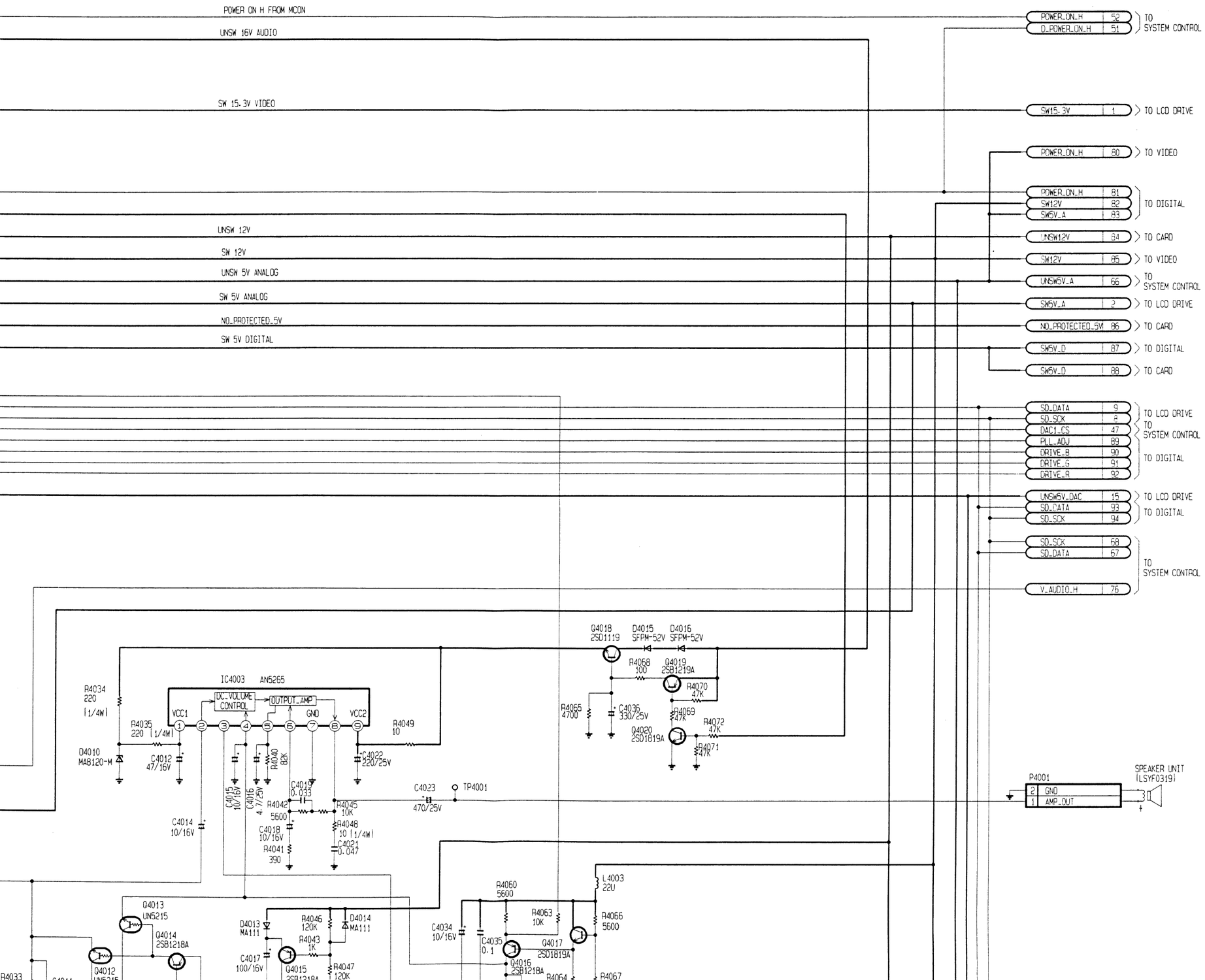
C3029 100/16V

R3095 27K
R3097 27K
R3099 27K
R3101 18K
R3096 8200
R3098 8200
R3100 8200
R3102 8200

R3077 390
R3054 0.1
R3078 390
R3055 0.1
R3072 390
R3079 390
R3056 0.1
R3073 390
R3074 0.1


TP3001
TP3002
L3007 22U
L3009 10U
L3006 10U
L3005 22U
L3008 22U
IC3006
M52348FP
IC3007
M52347FP
IC3008
AN93806SCRE1
IC3009
M62353GP
DAC3
C3017 100/6.3V
C3029 100/16V
C3030 0.1
R3080 39
R3081 39
R3082 39
C3051 1
C3052 1
C3053 1
R3017 560
R3018 2400
R3014 560
R3015 2400
R3013 560
R3011 2400
Q3003 2SB1218A
Q3002 2SB1218A
Q3001 2SB1218A
R3019 1500
R3016 1500
R3012 1500
R3028 2200
R3022 2200
R3020 2200
C3018 47/6.3V
C3019 47/6.3V
C3020 47/6.3V
C3033 47/6.3V
C3032 47/6.3V
C3031 47/6.3V
R3056 2200
R3060 2200
R3063 2200
R3066 8200
R3067 8200
C3034 47/6.3V
C3035 0.01
C3037 120P
R3055 18K
C3043 560P
R3068 47K
R3069 47K
R3072 47K
R3073 2200
Q3010 2SD1819A
Q3011 2SD1819A
R3076 10K
Q3007 2SD1819A
Q3008 2SD1819A
Q3009 2SD1819A
R3070 100K
R3074 100K
C3045 100P
C3046 100P
C3047 1
R3071 100K
C3048 0.1
R3075 180K
R3054 39
C3036 1/50V
R3057 56K
C3039 0.068
C3040 0.01
C3042 10/16V
R3058 470
R3061 1K
C3041 10/16V
R3059 1K
C3038 10/16V
R3062 1K
R3085 0
R3086 0
R3087 0
R3088 10K
C3066 0.1
C3057 0.1
R3089 10K
R3090 10K
R3091 10K
R3092 10K
R3084 10K
R3083 12K
C3064 0.1
C3063 0.1
C3062 0.1
C3061 0.1
C3060 0.1
C3059 0.1
R3093 22K
R3103 10K
R3094 4700
R3104 15K
R3108 22K
R3044 1K
R3045 1K
R3046 1K
R3047 1K
R3109 22K
R3095 27K
R3096 8200
R3097 27K
R3098 8200
R3099 27K
R3100 8200
R3101 18K
R3102 8200
R3077 390
R3078 390
R3079 390
C3049 0.1
C3067 0.1
C3050 0.1
C3068 0.1
C3028 0.1
C3069 0.1
C3070 0.1
C3054 0.1
C3071 0.1
C3055 0.1
C3072 0.1
C3056 0.1
C3073 0.1
C3074 0.1
C3021 0.1
C3048 3300
C3023 0.1
C3025 0.1
R3049 3900
R3050 3900
R3051 3900
R3052 3900
R3053 3900
C3022 0.1
C3024 0.1
C3026 0.1
C3027 0.1
R4025 10K
R4027 3900
R4020 47K
Q4005 2SB1218A
Q4008 2SD1819ARS
R4033 220K
C4011 5600P
Q4012 UN5215
Q4013 UN5215
Q4014 2SB1218A
R4036 10K
D4013 MA111
R4046 120K
R4043 1K
D4014 MA111
C4017 100/16V
Q4015 2SB1218A
R4047 120K
C4020 2.2/35V
R4038 2200
D4012 MA142WK
C4034 10/16V
C4035 0.1
R4063 10K
Q4017 2SD1819A
Q4016 2SB1218A
R4061 68K
R4062 18K
R4064 10K
R4066 5600
R4067 10K

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SINE ⚠ HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE
ONLY THE SPECIFIED PARTS.



VOLTAGE CHART

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
IC1901		22	2.9	C	5.0
1	16.2	23	11.8	B	0.3
2	3.5	24	11.8	**Q3009**	
3	15.3	25	2.6	E	0
4	1.3	26	2.9	C	4.9
5	0	27	11.8	B	0.3
IC3001		28	11.8	**Q3010**	
1	5.8	**IC3009**		E	4.4
2	0	1	0	C	5.0
3	5.8	2	1.7	B	0.5
4	5.8	3	3.0	**Q3011**	
5	12.0	4	3.1	E	0
IC3002		5	3.4	C	0
1	5.7	6	3.5	B	0.6
2	0	7	3.3	**Q4001**	
3	5.7	8	5.0	E	1.8
4	5.7	9	5.0	C	5.0
5	12.0	10	2.5	B	2.4
IC3003		11	3.6	**Q4002**	
1	5.7	12	0	E	1.8
2	0	13	4.4	C	5.0
3	5.7	14	0.7	B	2.4
4	5.7	15	2.1	**Q4003**	
5	12.0	16	0	E	1.8
IC3004		**IC4001**		C	5.0
1	0	1	1.8	B	2.4
2	0	2	0	**Q4004**	
3	0	3	0	E	1.8
4	0	4	0	C	5.0
5	4.8	5	0	B	2.4
6	0	6	1.8	**Q4005**	
7	0.2	7	1.8	E	2.5
8	5.0	8	5.0	C	0
IC3005		**IC4002**		B	1.8
1	0	1	1.8	**Q4006**	
2	0	2	0	E	2.5
3	0.2	3	0	C	0
4	0	4	0	B	1.8
5	0	5	0	**Q4007**	
6	0.2	6	1.8	E	0
7	0	7	1.8	C	0
8	0.6	8	5.0	B	0.2
9	0.4	**IC4003**		**Q4008**	
10	0	1	10.6	E	0
11	0.8	2	4.7	C	0
12	0.4	3	0	B	-0.2
13	0	4	3.1	**Q4009**	
14	5.0	5	6.1	E	0
IC3006		6	6.2	C	-0.2
1	4.9	7	0	B	0
2	1.8	8	6.3	**Q4010**	
3	4.9	9	14.5	E	1.9
4	0	**IC4004**		C	5.0
5	1.8	1	0	B	2.5
6	4.9	2	1.9	**Q4011**	
7	1.8	3	3.3	E	0
8	5.0	4	2.7	C	5.1
9	5.0	5	2.7	B	0
10	0	6	2.9	**Q4012**	
11	1.8	7	3.4	E	0
12	0	8	5.0	C	0
13	1.8	9	5.0	B	-0.5
14	0	10	3.6	**Q4013**	
15	0	11	3.6	E	3.1
16	1.8	12	0	C	0
17	4.2	13	4.4	B	-0.5
18	4.6	14	0.7	**Q4014**	
19	5.1	15	2.0	E	0.1
20	0	16	0	C	-0.2
21	4.5	**IC4005**		B	0
22	4.3	1	5.0	**Q4015**	
23	0	2	0	E	12.0
24	4.9	3	12.1	C	-0.4
25	1.2			B	12.0
26	0	**Q1901**		**Q4016**	
27	2.0	E	0	E	7.7
28	4.9	C	0	C	3.0
29	0	B	0.7	B	7.1
30	1.9	**Q1902**		**Q4017**	
31	4.9	E	0	E	7.1
32	0	C	0	C	12.1
33	0	B	0.7	B	7.7
34	0	**Q1903**		**Q4018**	
35	1.9	E	12.1	E	14.7
36	4.9	C	12.1	C	14.7
IC3007		B	15.4	B	15.4
1	5.0	**Q1904**		**Q4019**	
2	5.0	E	5.2	E	16.1
3	0	C	5.2	C	16.0
4	3.1	B	15.4	B	15.5
5	0	**Q1905**		**Q4020**	

SW 12V

UNSW 5V ANALOG

SW 5V ANALOG

NO_PROTECTED_5V

SW 5V DIGITAL

SW12V 85 TO VIDEO

UNSW5V_A 66 TO SYSTEM CONTROL

SW5V_A 2 TO LCD DRIVE

NO_PROTECTED_5V 86 TO CARD

SW5V_D 87 TO DIGITAL

SW5V_D 88 TO CARD

SD_DATA 9 TO LCD DRIVE

SD_SCK 8 TO SYSTEM CONTROL

DAC1_CS 47

PLL_ADJ 89

DRIVE_B 90 TO DIGITAL

DRIVE_G 91

DRIVE_R 92

UNSW5V_DAC 15 TO LCD DRIVE

SD_DATA 93 TO DIGITAL

SD_SCK 94

SD_SCK 68

SD_DATA 67 TO SYSTEM CONTROL

V_AUDIO_H 76

Q4019 2SD1119 D4015 SFPM-52V D4016 SFPM-52V

R4068 100 Q4019 2SB1219A R4070 47K

R4065 4700 C4036 330/25V R4069 47K R4072 47K

Q4020 2SD1819A R4071 47K

IC4003 AN5265

R4034 220 (1/4W)

R4035 220 (1/4W)

DC_VOLUME CONTROL OUTPUT_AMP VCC1 GND VCC2

R4049 10

D4010 MA8120-M C4012 47/16V

R4040 82K C4022 220/25V

C4015 10/16V C4016 4.7/25V C4013 0.033

C4023 470/25V TP4001

R4042 5600 R4045 10K

C4014 10/16V C4018 10/16V R4048 10 (1/4W)

R4041 390 C4021 0.047

P4001 2 GND 1 AMP_OUT

SPEAKER UNIT (LSYF0319)

L4003 22U

R4060 5600

Q4013 UN5215 Q4014 2SB1218A

D4013 MA111 R4046 120K D4014 MA111

R4043 1K

C4017 100/16V Q4015 2SB1218A R4047 120K C4020 2.2/35V

C4034 10/16V C4035 0.1 Q4016 2SB1218A Q4017 2SD1819A

R4063 10K R4066 5600

R4061 68K R4062 18K R4064 10K R4067 10K

R4033 220K C4011 5600P Q4012 UN5215 R4036 10K

R4038 2200 D4012 MA142WK

MUTE2_H 77

MUTE1_H 78

TO SYSTEM CONTROL

SYS_HS 45

SYS_VS 46

VIDEO_H 61

AD_CLP 95 TO DIGITAL

R3080 39 R3081 39 R3082 39

C3051 1 C3052 1 C3053 1

L3009 10U L3006 10U

L3007 22U

C3049 0.1 C3067 0.1 C3050 0.1 C3068 0.1 C3026 0.1 C3069 0.1 C3070 0.1

IC3008 AN93B06SCRE1

R.VCC R.VCC R_IN SUB.CONT_R G.VCC G.VCC G_IN SUB.CONT_G B.VCC B.VCC B_IN SUB.CONT_B CONTRAST CLP_IN

R.OUT CLAMP_R SUB.BAT_R R.GND G.OUT CLAMP_G SUB.BAT_G G.GND B.OUT CLAMP_B SUB.BAT_B B.GND TEST BRIGHT

C3029 100/16V

R3095 27K R3097 27K R3099 27K R3101 18K

R3096 820 R3098 820 R3100 820 R3102 820

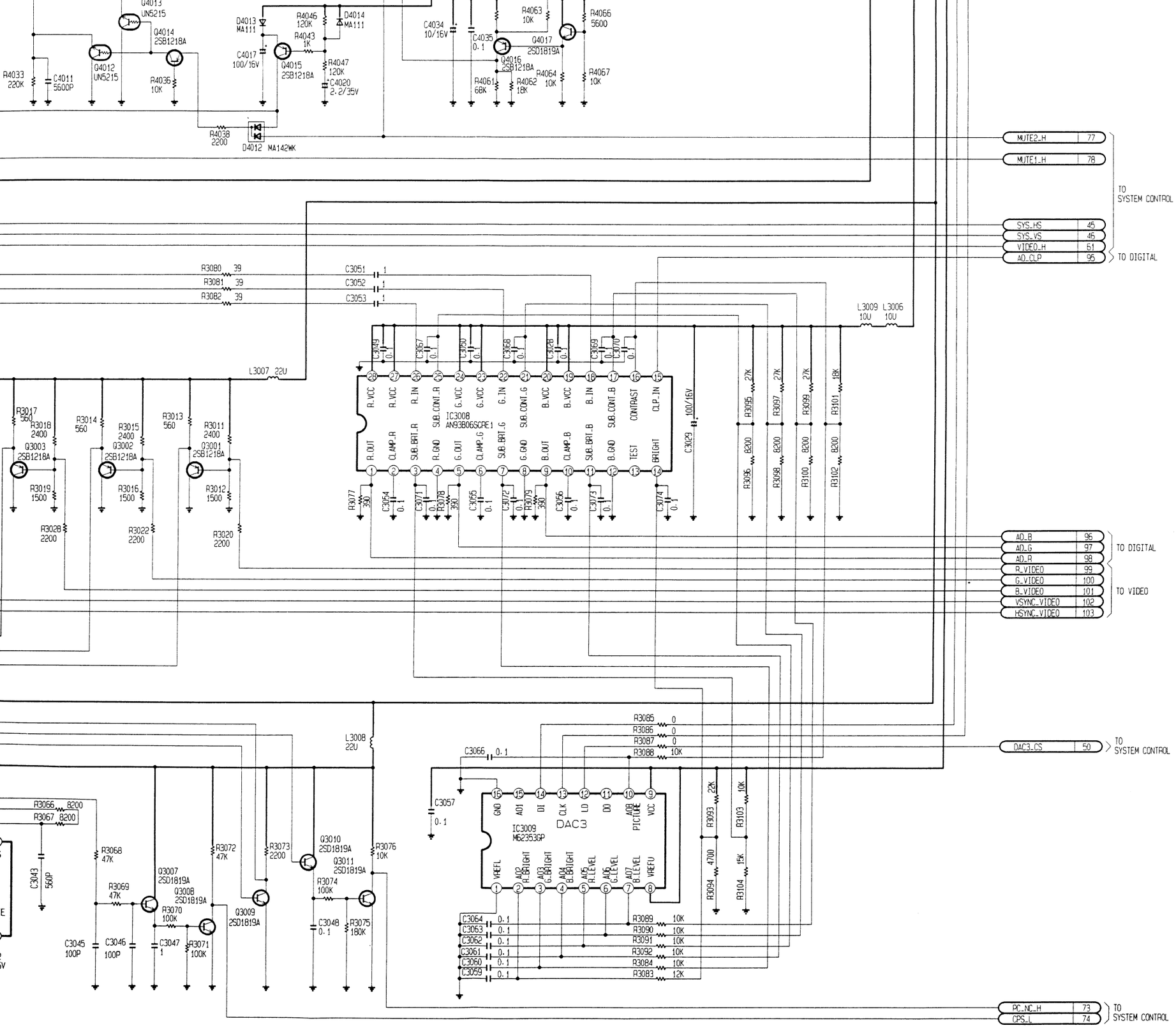
R3017 560 R3018 2400 Q3003 2SB1218A R3019 1500

R3014 560 R3015 2400 Q3002 2SB1218A R3016 1500

R3013 560 R3011 2400 Q3001 2SB1218A R3012 1500

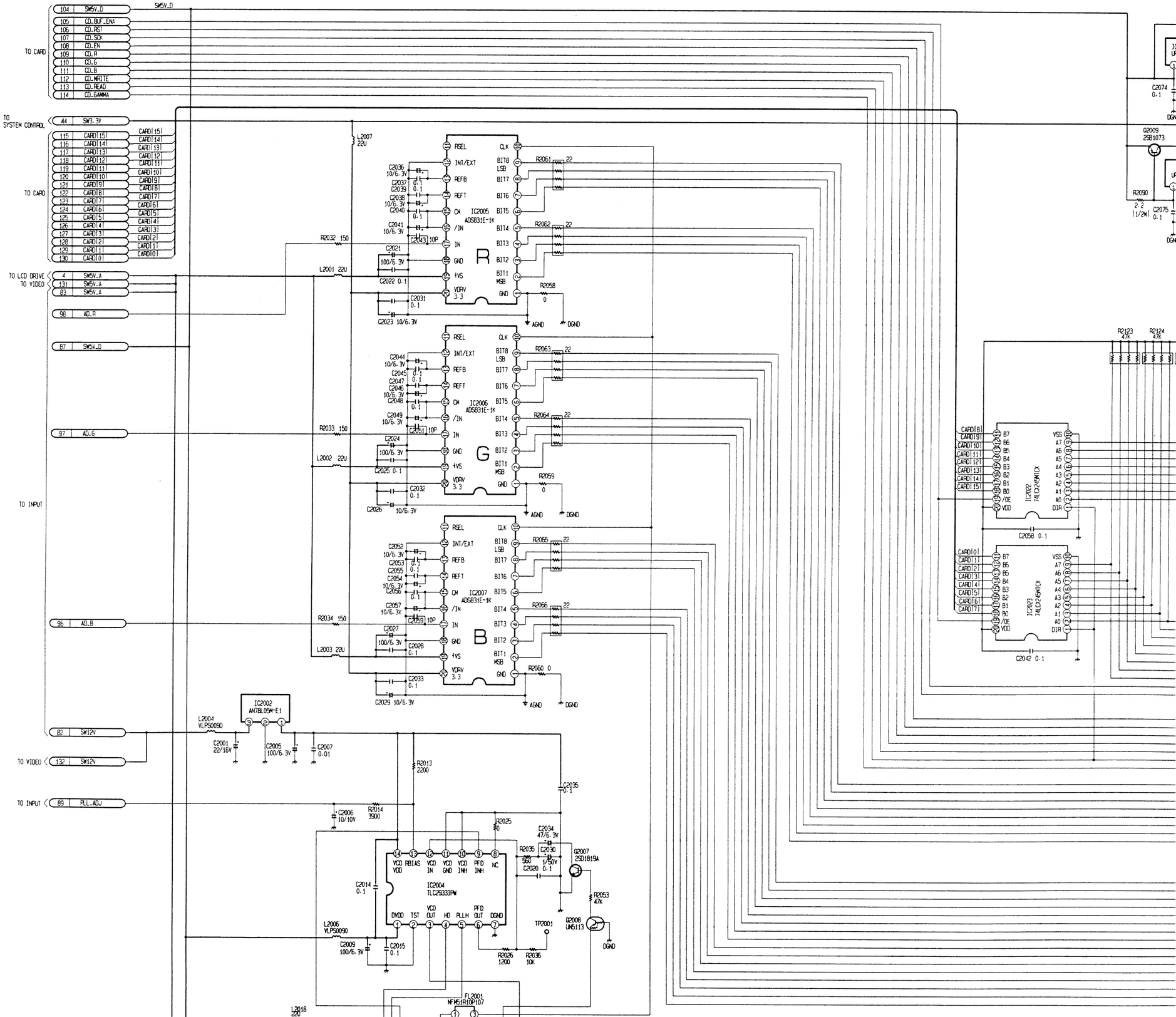
R3077 390 C3054 0.1 C3071 0.1 R3078 390 C3055 0.1 C3072 0.1 R3079 390 C3056 0.1 C3073 0.1 C3074 0.1

4	5.7	15	2.1	**Q4003**	
5	12.0	16	0	E	1.8
IC3004		**IC4001**		C	5.0
1	0	1	1.8	B	2.4
2	0	2	0	**Q4004**	
3	0	3	0	E	1.8
4	0	4	0	C	5.0
5	4.8	5	0	B	2.4
6	0	6	1.8	**Q4005**	
7	0.2	7	1.8	E	2.5
8	5.0	8	5.0	C	0
IC3005		**IC4002**		B	1.8
1	0	1	1.8	**Q4006**	
2	0	2	0	E	2.5
3	0.2	3	0	C	0
4	0	4	0	B	1.8
5	0	5	0	**Q4007**	
6	0.2	6	1.8	E	0
7	0	7	1.8	C	0
8	0.6	8	5.0	B	0.2
9	0.4	**IC4003**		**Q4008**	
10	0	1	10.6	E	0
11	0.8	2	4.7	C	0
12	0.4	3	0	B	-0.2
13	0	4	3.1	**Q4009**	
14	5.0	5	6.1	E	0
IC3006		6	6.2	C	-0.2
1	4.9	7	0	B	0
2	1.8	8	6.3	**Q4010**	
3	4.9	9	14.5	E	1.9
4	0	**IC4004**		C	5.0
5	1.8	1	0	B	2.5
6	4.9	2	1.9	**Q4011**	
7	1.8	3	3.3	E	0
8	5.0	4	2.7	C	5.1
9	5.0	5	2.7	B	0
10	0	6	2.9	**Q4012**	
11	1.8	7	3.4	E	0
12	0	8	5.0	C	0
13	1.8	9	5.0	B	-0.5
14	0	10	3.6	**Q4013**	
15	0	11	3.6	E	3.1
16	1.8	12	0	C	0
17	4.2	13	4.4	B	-0.5
18	4.6	14	0.7	**Q4014**	
19	5.1	15	2.0	E	0.1
20	0	16	0	C	-0.2
21	4.5	**IC4005**		B	0
22	4.3	1	5.0	**Q4015**	
23	0	2	0	E	12.0
24	4.9	3	12.1	C	-0.4
25	1.2			B	12.0
26	0	**Q1901**		**Q4016**	
27	2.0	E	0	E	7.7
28	4.9	C	0	C	3.0
29	0	B	0.7	B	7.1
30	1.9	**Q1902**		**Q4017**	
31	4.9	E	0	E	7.1
32	0	C	0	C	12.1
33	0	B	0.7	B	7.7
34	0	**Q1903**		**Q4018**	
35	1.9	E	12.1	E	14.7
36	4.9	C	12.1	C	14.7
IC3007		B	15.4	B	15.4
1	5.0	**Q1904**		**Q4019**	
2	5.0	E	5.2	E	16.1
3	0	C	5.2	C	16.0
4	3.1	B	15.4	B	15.5
5	0	**Q1905**		**Q4020**	
6	2.4	E	5.2	E	0
7	4.2	C	5.2	C	0
8	2.4	B	15.4	B	0.7
9	4.0	**Q1906**			
10	2.6	E	16.2	**P1901**	
11	0.8	C	16.2	1	1.1
12	0.8	B	15.5	2	5.1
13	0.3	**Q3001**		3	0
14	0.8	E	3.0	**P1902**	
15	4.4	C	0	1	9.4
16	5.0	B	2.4	2	4.7
17	0.5	**Q3002**		3	1.9
18	0	E	3.0	4	4.7
19	0	C	0	5	3.3
20	3.0	B	2.4	6	0
IC3008		**Q3003**		**P1905**	
1	2.1	E	3.0	1	16.2
2	4.6	C	0	2	12.2
3	3.0	B	2.3	3	5.2
4	0	**Q3004**		4	5.2
5	2.1	E	5.1	5	5.2
6	4.5	C	12.0	6	0
7	3.0	B	5.8	7	0
8	0	**Q3005**		8	0
9	2.2	E	5.1	**P4001**	
10	4.5	C	12.0	1	0
11	3.0	B	5.7	2	0
12	0	**Q3006**			
13	0	E	5.0	**TP1901**	12.1
14	1.3	C	12.0	**TP1902**	5.2
15	0.2	B	5.7	**TP1903**	5.2
16	3.3	**Q3007**		**TP1904**	15.3
17	2.6	E	0	**TP1907**	0
18	2.9	C	5.0	**TP1908**	15.3
19	11.8	B	0.3	**TP3001**	4.3
20	11.8	**Q3008**		**TP3002**	4.5
21	2.6	E	0	**TP4001**	0



35	1.9	E	12.1	E	14.7
36	4.9	C	12.1	C	14.7
IC3007		B	15.4	B	15.4
1	5.0	**Q1904**		**Q4019**	
2	5.0	E	5.2	E	16.1
3	0	C	5.2	C	16.0
4	3.1	B	15.4	B	15.5
5	0	**Q1905**		**Q4020**	
6	2.4	E	5.2	E	0
7	4.2	C	5.2	C	0
8	2.4	B	15.4	B	0.7
9	4.0	**Q1906**			
10	2.6	E	16.2	**P1901**	
11	0.8	C	16.2	1	1.1
12	0.8	B	15.5	2	5.1
13	0.3	**Q3001**		3	0
14	0.8	E	3.0	**P1902**	
15	4.4	C	0	1	9.4
16	5.0	B	2.4	2	4.7
17	0.5	**Q3002**		3	1.9
18	0	E	3.0	4	4.7
19	0	C	0	5	3.3
20	3.0	B	2.4	6	0
IC3008		**Q3003**		**P1905**	
1	2.1	E	3.0	1	16.2
2	4.6	C	0	2	12.2
3	3.0	B	2.3	3	5.2
4	0	**Q3004**		4	5.2
5	2.1	E	5.1	5	5.2
6	4.5	C	12.0	6	0
7	3.0	B	5.8	7	0
8	0	**Q3005**		8	0
9	2.2	E	5.1	**P4001**	
10	4.5	C	12.0	1	0
11	3.0	B	5.7	2	0
12	0	**Q3006**			
13	0	E	5.0	**TP1901**	12.1
14	1.3	C	12.0	**TP1902**	5.2
15	0.2	B	5.7	**TP1903**	5.2
16	3.3	**Q3007**		**TP1904**	15.3
17	2.6	E	0	**TP1907**	0
18	2.9	C	5.0	**TP1908**	15.3
19	11.8	B	0.3	**TP3001**	4.3
20	11.8	**Q3008**		**TP3002**	4.5
21	2.6	E	0	**TP4001**	0

DIGITAL SCHEMATIC DIAGARM



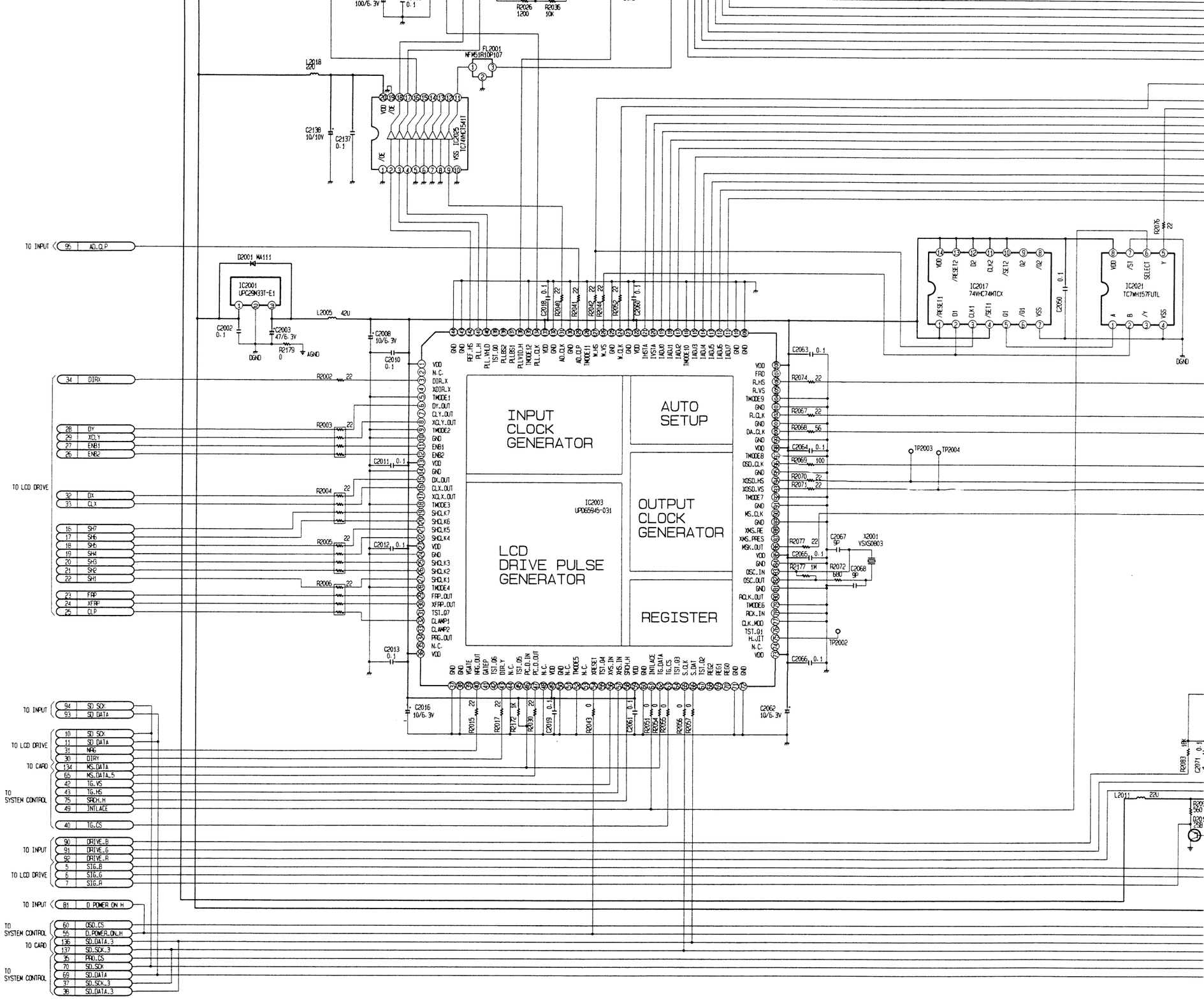
INPUT CLOCK GENERATOR

AUTO SETUP

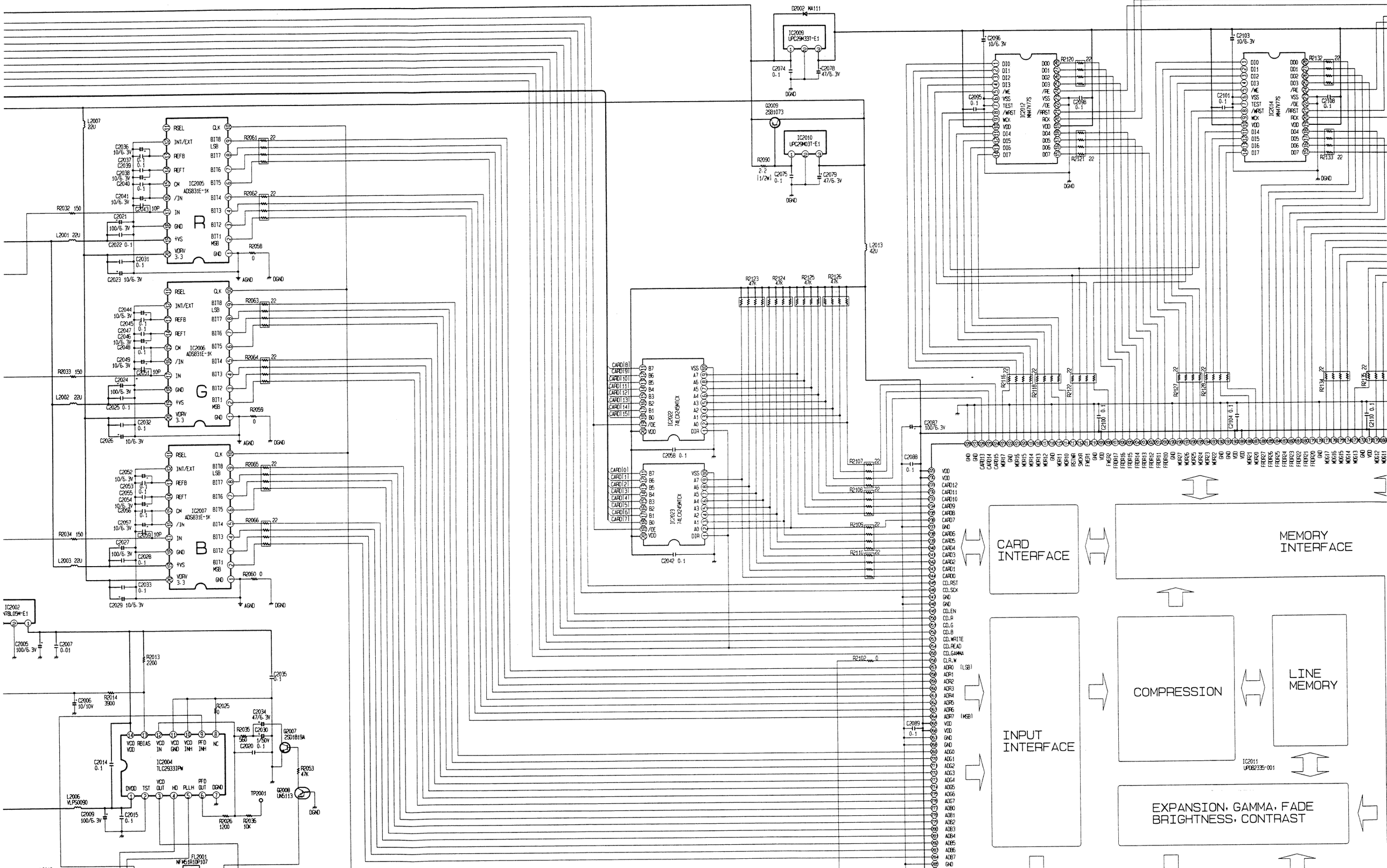
OUTPUT CLOCK GENERATOR

LCD DRIVE PULSE GENERATOR

IC2003 UPD65945-031


INPUT CLOCK GENERATOR
AUTO SETUP
OUTPUT CLOCK GENERATOR
LCD DRIVE PULSE GENERATOR
REGISTER
IC2003 UPD65945-031
IC2001 UPC29M33T-E1
D2001 MA111
IC2017 74VHC74MTCX
IC2021 TC7WH157FUTL
FL2001 NFM51R10P107
IC2035 TC74HCT541
X2001 VSXS0803
TO INPUT
TO LCD DRIVE
TO CARD
TO SYSTEM CONTROL
AD_CLP
DIRx
DY
XDLY
ENB1
ENB2
DX
CLX
SH7
SH6
SH5
SH4
SH3
SH2
SH1
FRP
XFRP
CLP
SD SCK
SD DATA
NRS
DIRY
MS_DATA
MS_DATA_S
TG_VS
TG_HS
SRCH_H
INTLACE
TG_CS
DRIVE_B
DRIVE_G
DRIVE_R
SIG_B
SIG_G
SIG_R
D_POWER ON H
OSD_CS
D_POWER_ON_H
SD_DATA_3
SD_SCK_3
PRO_CS
SD_SCK
SD_DATA
SD_SCK_3
SD_DATA_3
DGND
AGND
TP2003
TP2004
TP2002

RM


CARD INTERFACE
MEMORY INTERFACE
INPUT INTERFACE
COMPRESSION
LINE MEMORY
EXPANSION, GAMMA, FADE BRIGHTNESS, CONTRAST
IC2004 TLC2933IPW
IC2005 ADS831E-1K
IC2006 ADS831E-1K
IC2007 ADS831E-1K
IC2009 LPC29M33T-E1
IC2010 LPC29M03T-E1
IC2011 UPD82335-001
IC2012 M4M7V7S
IC2014 M4M7V7S
IC2022 74LCX245MTCX
IC2023 74LCX245MTCX
Q2007 2SD1819A
Q2008 UN5113
Q2009 2SB1073
D2002 MA111
FL2001 NFM51R10P107
TP2001
L2001 22U
L2002 22U
L2003 22U
L2006 VLP50090
L2007 22U
L2013 42U
R2032 150
R2033 150
R2034 150
R2102 0
R2107 22
R2108 22
R2105 22
R2110 22
R2090 2.2 1/2W
R2123 47K
R2124 47K
R2125 47K
R2126 47K
R2120 22
R2121 22
R2132 22
R2133 22
R2116 22
R2118 22
R2122 22
R2127 22
R2128 22
R2134 22
R2135 22
R2061 22
R2062 22
R2063 22
R2064 22
R2065 22
R2066 22
R2058 0
R2059 0
R2060 0
R2013 2200
R2014 3900
R2025 50
R2035 680
R2053 47K
R2026 1200
R2036 10K
C2005 100/6.3V
C2007 0.01
C2006 10/10V
C2035 0.1
C2034 47/6.3V
C2030 1/50V
C2020 0.1
C2014 0.1
C2009 100/6.3V
C2015 0.1
C2074 0.1
C2078 47/6.3V
C2075 0.1
C2079 47/6.3V
C2042 0.1
C2058 0.1
C2095 0.1
C2096 10/6.3V
C2098 0.1
C2101 0.1
C2103 10/6.3V
C2108 0.1
C2087 100/6.3V
C2088 0.1
C2089 0.1
C2100 0.1
C2104 0.1
C2110 0.1
C2036 10/6.3V
C2037 0.1
C2039 0.1
C2038 10/6.3V
C2040 0.1
C2041 10/6.3V
C2043 10P
C2021 100/6.3V
C2022 0.1
C2031 0.1
C2023 10/6.3V
C2044 10/6.3V
C2045 0.1
C2047 0.1
C2046 10/6.3V
C2048 0.1
C2049 10/6.3V
C2051 10P
C2024 100/6.3V
C2025 0.1
C2032 0.1
C2026 10/6.3V
C2052 10/6.3V
C2053 0.1
C2055 0.1
C2054 10/6.3V
C2056 0.1
C2057 10/6.3V
C2059 10P
C2027 100/6.3V
C2028 0.1
C2033 0.1
C2029 10/6.3V
AGND
DGND
R
G
B
CARD[0]
CARD[1]
CARD[2]
CARD[3]
CARD[4]
CARD[5]
CARD[6]
CARD[7]
CARD[8]
CARD[9]
CARD[10]
CARD[11]
CARD[12]
CARD[13]
CARD[14]
CARD[15]
CD.RST
CD.SCK
CD.EN
CD.R
CD.G
CD.B
CD.WRITE
CD.READ
CD.GAMMA
CD.R.W
ADR[0] (LSB)
ADR[7] (MSB)

CARD INTERFACE

MEMORY INTERFACE

COMPRESSION

LINE MEMORY

INPUT INTERFACE

EXPANSION, GAMMA, FADE BRIGHTNESS, CONTRAST

AUTO SETUP

OUT PUT INTERFACE

OSD MOUSE OSD

INPUT CLOCK GENERATOR

AUTO SETUP

OUTPUT CLOCK GENERATOR

LCD DRIVE PULSE GENERATOR

IC2011 UPD82335-001

IC2003 UPD65945-031

IC2004 TLC29331PW

IC2017 74VHC74MTCX

IC2021 TC7WH157FUTL

IC2022 74LCX245MTCX

IC2023 74LCX245MTCX

IC2006 ADS831E-1K

IC2007 ADS831E-1K

IC2002 7L05M-E1

Q2007 2SD1819A

Q2008 UN5113

FL2001 NFM51R10P107

X2001 VSXSO803

TP2001

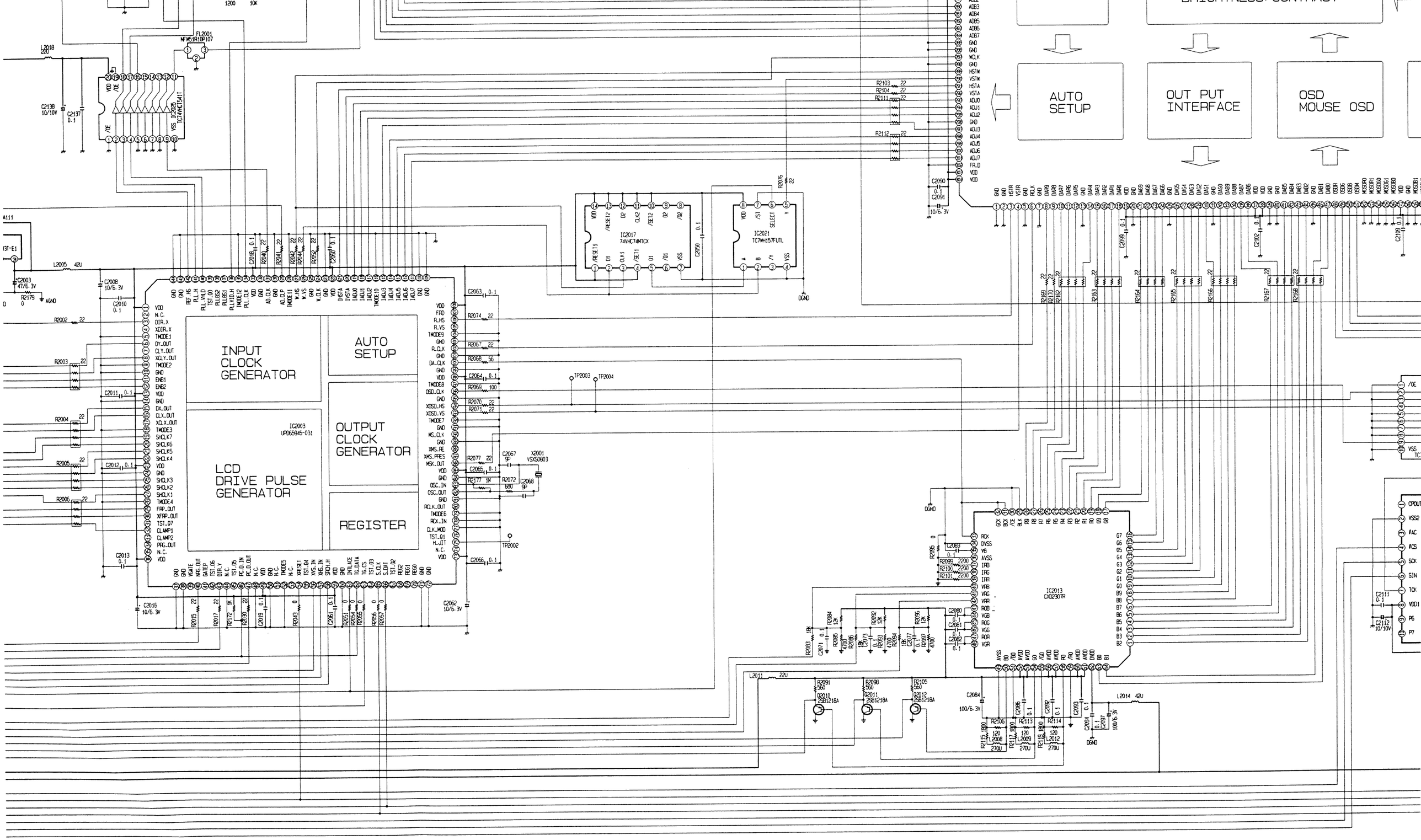
TP2003 TP2004

G

B

AGND

DGND


AUTO SETUP
OUT PUT INTERFACE
OSD MOUSE OSD
INPUT CLOCK GENERATOR
AUTO SETUP
OUTPUT CLOCK GENERATOR
LCD DRIVE PULSE GENERATOR
REGISTER
IC2003 UPD65945-031
IC2017 74VHC74MTCx
IC2021 TC7WH157FUTL
IC2013 CXD2307R
IC2005 TC74WHCT541
FL2001 NFM51R10P107
DGND
AGND

CARD INTERFACE

INPUT INTERFACE

MEMORY INTERFACE

COMPRESSION

LINE MEMORY

EXPANSION, GAMMA, FADE BRIGHTNESS, CONTRAST

IC2011 UPD82335-001

IC2012 IC2013 IC2014 IC2015 IC2016 IC2017 IC2018 IC2019 MN47V77S

C2096 C2103 C2114 C2128 C2129 10/6.3V

C2098 C2108 C2119 C2124 C2125 C2135 C2136 C2139 C2157 C2158 0.1

C2100 C2101 C2104 C2110 C2113 C2115 C2116 C2121 C2122 C2135 C2136 0.1

R2120 R2121 R2132 R2133 R2143 R2144 R2154 R2155 R2157 R2158 22

R2116 R2118 R2122 R2127 R2128 R2134 R2135 R2138 R2145 R2146 R2147 R2148 R2149 R2150 R2151 R2152 100

DGND

CARD
INTERFACE

INPUT
INTERFACE

MEMORY
INTERFACE

COMPRESSION

LINE
MEMORY

IC2011
UPD82335-001

EXPANSION, GAMMA, FADE
BRIGHTNESS, CONTRAST

AUTO
SETUP

OUT PUT
INTERFACE

OSD
MOUSE OSD

CONTROL
REGISTER

IC2018
MN47V77S

IC2019
MN47V77S

IC2020
MN47V77S

EXPANSION, GAMMA, FADE
BRIGHTNESS, CONTRAST

AUTO
SETUP

OUT PUT
INTERFACE

OSD
MOUSE OSD

CONTROL
REGISTER

IC2013
CXD2307R

IC2019
MN47V775

IC2020
MN47V775

IC2024
TC74VHCT541T

IC2015
MCS012E05FP

L2014 42U

L2012
270U

L2015
22U

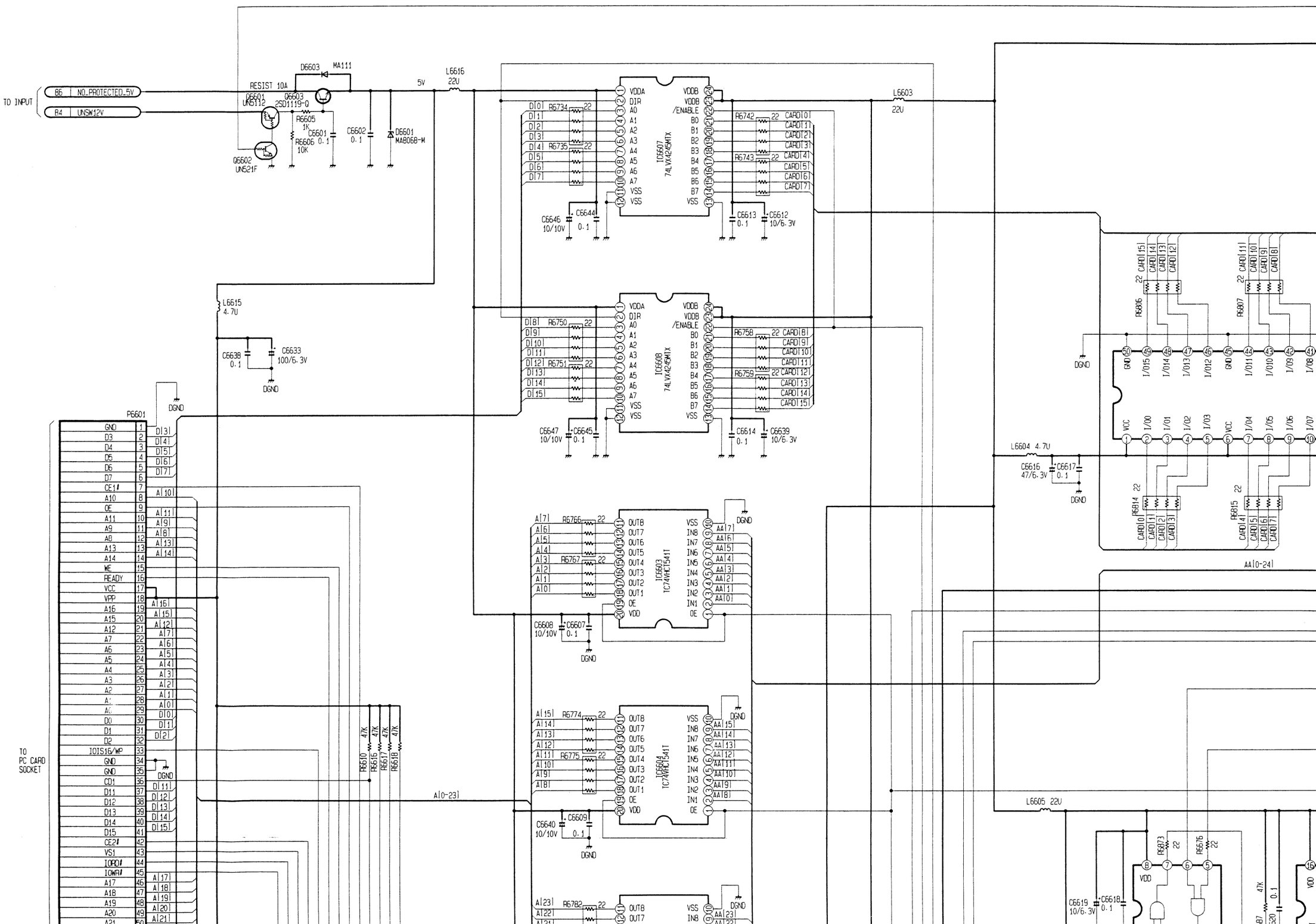
VOLTAGE CHART OF DIGITAL SCHEMATIC DIAGRAM

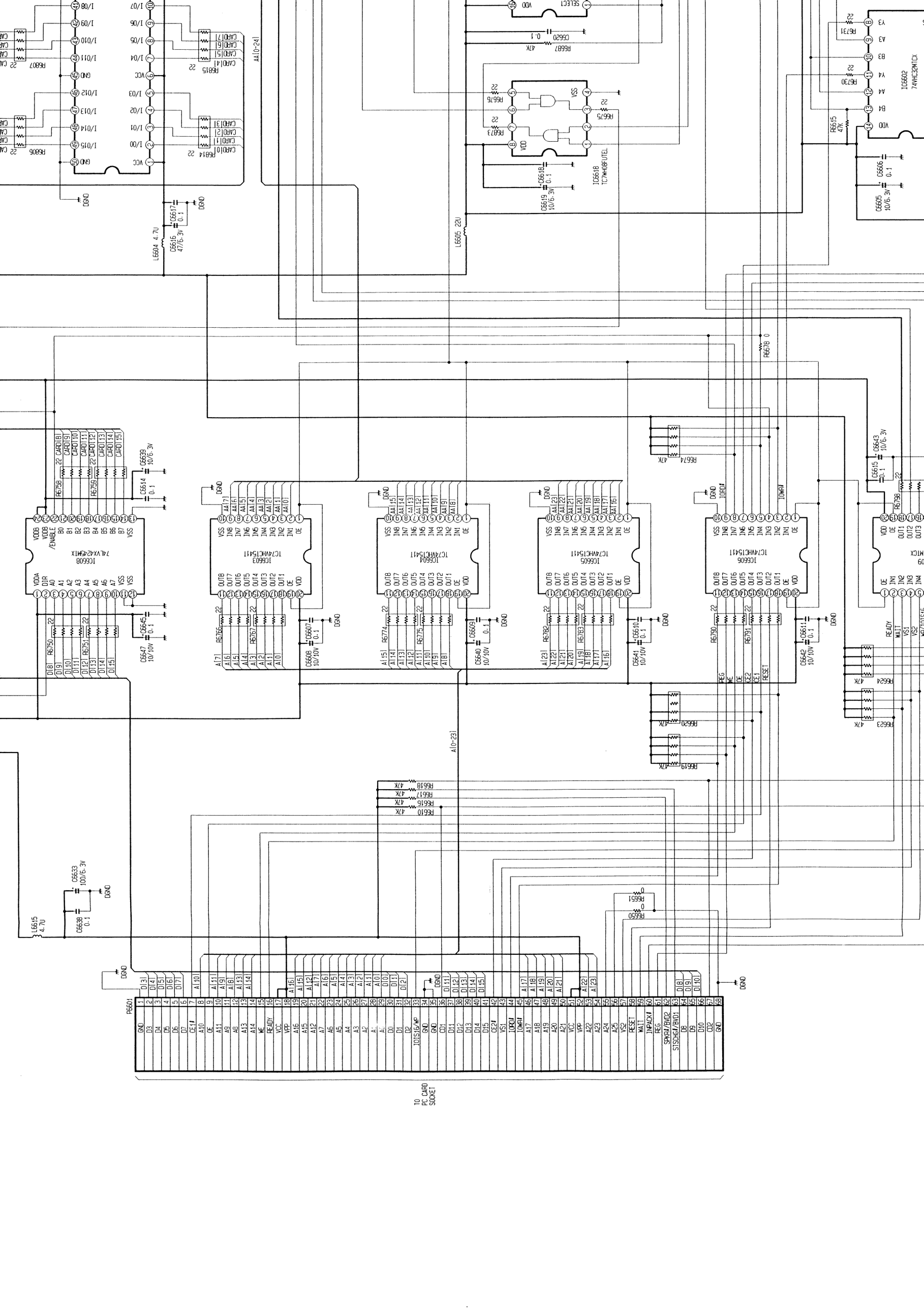
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
IC2001		72	0	7	0	IC2009		72	0.4	152	3.0	232	0.7	7	0	58	0.7	23	0	1	1.0	1	0
1	5.1	73	3.3	8	0	1	5.1	73	2.9	153	0	233	0.2	8	3.0	59	0	24	0.6	2	1.0	2	2.9
2	0	74	0	9	0	2	0	74	3.0	154	0	234	0.2	9	1.4	60	5.0	25	1.2	3	1.0	3	0
3	3.3	75	0	10	0	3	3.3	75	0	155	1.7	235	0.2	10	3.3	61	5.0	26	1.3	4	1.1	4	3.3
IC2002		76	0	11	0	IC2010		76	0	156	1.8	236	0.1	11	1.7	62	5.2	27	1.7	5	0.8	5	0
1	5.0	77	3.3	12	2.3	1	4.7	77	3.0	157	2.0	237	0	12	1.1	63	0.8	28	1.7	6	0	6	0
2	0	78	1.7	13	3.3	2	0	78	3.0	158	2.6	238	0	13	1.6	64	1.0	IC2017		7	0	7	0
3	12.1	79	0	14	5.0	3	3.0	79	0	159	1.3	239	0	14	1.3	IC2014		1	3.3	8	3.0	8	0
IC2003		80	1.6	IC2005		IC2011		80	0	160	1.2	240	0.6	15	1.4	1	1.0	2	0	9	1.4	9	1.8
1	3.3	81	0	1	0	1	0	81	1.7	161	1.2	241	0.1	16	1.5	2	1.0	3	0.2	10	3.3	10	0
2	0	82	1.6	2	1.0	2	0	82	1.7	162	1.2	242	0.1	17	1.3	3	1.1	4	3.3	11	1.8	11	2.7
3	0	83	1.5	3	1.0	3	0.4	83	1.7	163	0.8	243	0.7	18	2.6	4	1.0	5	0	12	1.1	12	0
4	0.6	84	0	4	1.0	4	0	84	2.4	164	0.8	244	0.1	19	3.3	5	0.8	6	3.3	13	1.4	13	0
5	0	85	3.3	5	1.1	5	0	85	1.3	165	1.4	245	3.2	20	1.4	6	0	7	0	14	1.5	14	0
6	0	86	0	6	1.8	6	1.8	86	1.2	166	0	246	3.2	21	3.0	7	0	8	0	15	1.7	15	0
7	1.7	87	3.3	7	1.1	7	0	87	1.2	167	3.0	247	0	22	0	8	3.0	9	3.3	16	1.8	16	5.1
8	1.7	88	3.3	8	1.3	8	1.9	88	1.2	168	1.5	248	0	23	0	9	1.4	10	3.3	17	1.7	17	0
9	0	89	0	9	1.4	9	1.4	89	1.5	169	1.3	249	3.2	24	0.6	10	3.3	11	3.3	18	2.4	18	14.4
10	0	90	0	10	2.3	10	1.3	90	1.4	170	1.5	250	0	25	1.2	11	1.6	12	3.3	19	3.3	19	0
11	0.9	91	0	11	4.8	11	1.3	91	1.1	171	3.0	251	0	26	1.3	12	1.1	13	3.3	20	1.4	20	5.1
12	0.9	92	0	12	0	12	1.3	92	1.8	172	0	252	0	27	1.2	13	1.7	14	3.3	21	3.0	IC2025	
13	3.3	93	3.3	13	2.0	13	0	93	1.1	173	0	253	0	28	1.2	14	1.3	IC2018		22	0	1	0
14	0	94	2.9	14	3.0	14	1.5	94	1.0	174	1.1	254	0	IC2013		15	1.7	1	1.0	23	0	2	0.5
15	0.1	95	0	15	2.4	15	1.3	95	0	175	1.0	255	0	1	1.6	16	1.7	2	1.0	24	0.6	3	0.2
16	2.1	96	1.8	16	2.4	16	1.4	96	0	176	1.0	256	4.5	2	1.1	17	1.5	3	1.0	25	1.3	4	0
17	2.2	97	0	17	2.1	17	1.1	97	1.0	177	1.0	257	1.4	3	1.4	18	2.3	4	1.1	26	1.2	5	0
18	0	98	3.3	18	0	18	0.9	98	1.0	178	0	258	1.2	4	1.2	19	3.3	5	0.8	27	1.2	6	0
19	0.7	99	0	19	5.0	19	3.0	99	1.3	179	1.7	259	1.0	5	1.3	20	1.4	6	0	28	1.2	7	0
20	3.4	100	1.8	20	3.0	20	0	100	1.3	180	1.9	260	1.8	6	1.3	21	3.0	7	0	IC2021		8	0
21	0.7	101	0	IC2006		21	1.9	101	1.3	181	1.8	261	1.1	7	1.4	22	0	8	3.0	1	0	9	1.6
22	0.7	102	1.8	1	0	22	1.4	102	2.8	182	2.3	262	1.0	8	1.9	23	0	9	1.4	2	0	10	0
23	3.3	103	0	2	1.0	23	1.3	103	1.3	183	1.3	263	1.0	9	0.8	24	0.6	10	3.3	3	3.3	11	2.3
24	0	104	0	3	1.0	24	1.4	104	1.2	184	1.2	264	1.0	10	0.9	25	1.2	11	1.9	4	0	12	0
25	0	105	0	4	1.0	25	0	105	1.2	185	1.2	265	3.1	11	1.6	26	1.3	12	1.4	5	0	13	0
26	0.7	106	0.4	5	1.1	26	1.2	106	1.2	186	1.2	266	3.1	12	0.9	27	1.2	13	1.3	6	0	14	0
27	0.7	107	1.7	6	1.9	27	1.2	107	0	187	1.5	267	0	13	1.3	28	1.2	14	1.5	7	0	15	0
28	0	108	3.3	7	1.3	28	0.9	108	0.8	188	1.2	268	0	14	1.1	IC2015		15	1.7	8	3.3	16	0
29	1.7	109	0	8	1.3	29	1.7	109	0.8	189	3.0	269	1.4	15	1.4	1	0	16	1.9	IC2022		17	0.3
30	1.6	110	0	9	1.4	30	1.0	110	1.4	190	3.0	270	1.2	16	1.3	2	0	17	2.1	1	0	18	0.6
31	0	111	0	10	2.3	31	0	111	3.0	191	0	271	1.4	17	1.4	3	5.0	18	2.5	2	0.7	19	0
32	0	112	3.0	11	4.8	32	0.8	112	1.5	192	0	272	1.9	18	1.9	4	4.4	19	3.3	3	0.7	20	5.1
33	3.3	113	3.0	12	0	33	1.9	113	3.0	193	1.1	273	1.1	19	0.8	5	4.4	20	1.4	4	0.7		
34	0	114	3.0	13	2.0	34	1.4	114	3.0	194	1.9	274	1.0	20	1.1	6	0.7	21	3.0	5	0.7	Q2007	
35	0	115	0	14	3.0	35	1.3	115	0	195	1.1	275	1.0	21	1.2	7	2.7	22	0	6	0.7	E	0
36	3.3	116	0	15	2.4	36	1.3	116	0	196	1.0	276	1.0	22	1.2	8	5.1	23	0	7	0.2	C	0.2
37	0	117	0	16	2.4	37	3.0	117	1.4	197	1.0	277	1.4	23	1.4	9	0	24	0.6	8	0.2	B	-1.0
38	0	118	0	17	2.1	38	3.0	118	1.1	198	1.0	278	1.3	24	1.3	10	0	25	1.3	9	0.2	Q2008	
39	0	119	3.0	18	0	39	0	119	1.9	199	0	279	1.1	25	1.2	11	0	26	1.2	10	0	E	0
40	0.2	120	0	19	5.0	40	0	120	1.1	200	1.6	280	1.8	26	1.3	12	0	27	1.2	11	0.2	C	-1.0
41	0	121	0	20	3.0	41	1.3	121	0	201	1.6	281	1.1	27	1.4	13	0	28	1.2	12	0.2	B	0
42	0	122	3.3	IC2007		42	1.5	122	1.0	202	1.5	282	1.0	28	1.9	14	0	IC2019		13	0.2	Q2009	
43	4.0	123	0	1	0	43	1.1	123	1.0	203	2.6	283	1.0	29	0	15	0	1	1.0	14	0.7	E	5.1
44	0	124	1.6	2	1.0	44	1.8	124	1.0	204	1.3	284	1.0	30	0	16	0	2	1.0	15	0.7	C	3.0
45	0	125	0	3	1.0	45	0	125	1.7	205	1.2	285	0	31	1.9	17	0	3	1.0	16	0.7	B	4.7
46	1.2	126	0	4	1.0	46	0.9	126	1.9	206	1.2	286	0	32	1.9	18	4.4	4	1.0	17	0.7	Q2010	
47	1.5	127	0.2	5	1.0	47	0.8	127	2.1	207	1.2	287	1.6	33	1.9	19	5.1	5	0.8	18	0.7	E	1.4
48	0	128	0	6	1.8	48	0	128	2.5	208	0.8	288	0	34	0	20	5.1	6	0	19	0	C	0
49	3.3	129	0.2	7	1.1	49	0	129	1.3	209	3.0	289	0.2	35	1.3	IC2016		7	0	20	3.0	B	0.7
50	0	130	0	8	1.5	50	0	130	1.2	210	0	290	0	36	0	1	1.0	8	3.0	IC2023		Q2011	
51	0	131	1.6	9	1.3	51	0	131	1.2	211	0.8	291	0	37	1.6	2	1.0	9	1.4	1	0	E	1.4
52	0	132	0	10	2.3	52	0	132	1.2	212	1.4	292	0	38	1.6	3	1.1	10	3.3	2	0.1	C	0
53	0	133	3.3	11	4.8	53	0	133	0	213	3.0	293	3.0	39	1.6	4	1.0	11	1.9	3	0.1	B	0.7
54	0	134	2.4	12	0	54	0	134	0	214	1.5	294	0	40	1.6	5	0.8	12	1.1	4	0	Q2012	
55	0	135	0	13	2.0	55	0	135	1.5	215	1.2	295	0	41	1.6	6	0	13	1.4	5	0.6	E	1.4
56	3.3	136	0	14	3.0	56	0	136	1.3	216	0	296	0	42	1.6	7	0	14	1.5	6	0	C	0
57	2.9	137	0	15	2.5	57	3.0	137	1.5	217	1.9	297	0	43	3.1	8	3.0	15	1.4	7	0.1	B	0.7
58	0	138	0.8	16	2.5	58	0	138	1.9	218	1.9	298	3.0	44	3.1	9	1.4	16	1.4	8	0.7		
59	3.3	139	0	17	2.1	59	0	139	0	219	1.1	299	3.0	45	3.1	10	3.3	17	1.3	9	0.1	TP2001	2.2
60	0	140	0	18	0	60	0	140	1.1	220	1.0	300	3.0	46	3.1	11	1.8	18	2.8	10	0	TP2002	0
61	0	141	0.2	19	5.0	61	0	141	1.0	221	1.0	301	0	47	3.1	12	1.3	19	3.3	11	0.1	TP2003	2.9
62	1.2	142	0	20	3.0	62	0	142	1.0	222	0	302	0	48	3.1	13	1.7	20	1.4	12	0.7	TP2004	3.3
63	0.3	143	0	IC2008		63	0	143	1.0	223	1.0	303	3.0	49	0	14	1.4	21	3.0	13	0.1		
64	0	144	0	1	1.6	64	0	144	0.6	224	0.9	304	3.0	50	0.7	15	1.5	22	0	14	0.1		
65	2.9	IC2004		2	1.6	65	0	145	0	225	0.7	IC2012		51	0	16	1.4	23	0	15	0.6		
66	0.4	1	5.1	3	0	66	0	146	1.4	226	0.7	1	1.0	52	5.0	17	1.4	24	0.6	16	0		
67	0	2	0	4	0	67	0	147	3.0	227	0	2	1.0	53	5.0	18	2.8	25	1.3	17	0		
68	0	3	2.4	5	3.3	68	0	148	0.6	228	0	3	1.0	54	0.7	19	3.3	26	1.2	18	0.1		
69	0	4	0.6	6	3.3	69	0	149	1.4	229	3.0	4	1.0	55	0	20	1.4	27	1.2	19	0		
70	0	5	0.3	7	1.7	70	0	150	3.0	230	3.0	5	0.8	56	5.0	21	3.0	28	1.2	20	3.0		
71	0	6	2.3	8	0	71	4.5	151	3.0	231	0.7	6	0	57	5.0	22	0	IC2020		IC2024			

VOLTAGE CHART OF PC CARD SCHEMATIC DIAGRAM

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
IC6601		11	0	1	5.2	4	0	36	2.8	4	0	29	0.2	33	0.2	86	3.2	15	0	68	0		
1	0	12	3.7	2	3.3	5	3.3	37	2.7	5	3.2	30	0.2	34	0.2	87	0	16	1.9				
2	2.9	13	4.1	3	0.4	6	5.2	38	2.6	6	0	31	0.7	35	0.3	88	0	17	5.2	**TP6603**	3.3		
3	0	14	0.7	4	0.4	7	5.2	39	0	7	3.1	32	0.2	36	0.7	89	0	18	4.5	**TP6604**	0		
4	0.3	15	4.7	5	0.3	8	0	40	0	8	3.1	33	0.2	37	0.7	90	0	19	5.2	**TP6605**	1.4		
5	3.3	16	3.6	6	0.5	9	0	41	0.2	**IC6614**		34	0.3	38	0.6	91	—	20	3.7	**TP6611**	3.3		
IC6602		17	1.2	7	0.5	10	0	42	0.2	1	5.2	35	0.1	39	0.6	92	—	21	0				
1	2.8	18	1.4	8	0.5	11	0	43	0.3	2	0	36	0.7	40	0	93	3.2	22	1.8				
2	0.3	19	0	9	0.5	12	0	44	0.7	3	3.3	37	3.3	41	0.7	94	3.3	23	3.3				
3	3.0	20	5.2	10	0.5	13	3.3	45	0	**IC6615**		38	2.4	42	0.7	95	2.0	24	3.7				
4	2.9	**IC6605**		11	0	14	3.3	46	0.7	1	0	39	0.7	43	3.2	96	0	25	5.1				
5	2.8	1	0	12	0	15	3.3	47	0.6	2	3.2	40	0.1	44	2.0	97	0	26	4.4				
6	3.1	2	0.5	13	0	16	0	48	0.7	3	3.2	41	0.6	45	1.2	98	3.3	27	0				
7	0	3	0.2	14	0.2	17	3.3	49	0.7	4	0.2	42	0.1	46	2.8	99	3.3	28	0.7				
8	3.3	4	2.3	15	0.1	18	3.3	50	0	5	0.2	43	0.7	47	2.3	100	0.3	29	4.7				
9	2.9	5	0.3	16	0	19	0	**IC6611**		6	0	44	0.2	48	1.1	**IC6618**		30	4.3				
10	3.2	6	0	17	0.6	20	3.3	1	0	7	0	45	0.7	49	2.3	1	3.2	31	0.8				
11	3.3	7	0	18	0.1	**IC6610**		2	3.2	8	3.2	46	0	50	2.7	2	3.2	32	0.9				
12	0.3	8	0.5	19	0.2	1	3.2	3	2.8	9	3.2	47	0	51	0.9	3	3.3	33	5.2				
13	3.2	9	2.9	20	0.7	2	0.1	4	3.2	10	3.2	48	0.2	52	0.8	4	0	34	5.2				
14	3.3	10	0	21	0.1	3	0.7	5	0	11	3.2	**IC6617**		53	2.2	5	3.2	35	5.2				
IC6603		11	4.7	22	3.3	4	0.2	6	3.2	12	3.2	1	—	54	2.9	6	3.2	36	5.2				
1	0	12	0.8	23	3.3	5	0.1	7	0	13	3.2	2	2.6	55	0.5	7	3.3	37	0.8				
2	0.7	13	0.8	24	3.3	6	3.2	8	0	14	3.2	3	2.4	56	2.5	8	3.3	38	5.2				
3	2.0	14	0	**IC6608**		7	0.6	9	3.2	**IC6616**		4	3.2	57	2.3			39	0				
4	1.1	15	0.4	1	5.2	8	0	10	3.2	1	0.5	5	1.4	58	2.6	**Q6601**		40	5.1				
5	2.8	16	3.6	2	3.3	9	0.1	11	3.2	2	2.7	6	3.1	59	0.6	E	12.1	41	0.4				
6	2.3	17	0.2	3	0.3	10	0.2	12	3.2	3	2.3	7	3.2	60	0.2	C	12.1	42	3.7				
7	1.1	18	0.9	4	0.3	11	0	13	3.2	4	2.5	8	3.2	61	2.2	B	0	43	3.6				
8	2.3	19	0	5	0.3	12	3.2	14	3.2	5	0.5	9	3.2	62	0.3	**Q6602**		44	4.1				
9	2.7	20	5.2	6	0.3	13	2.4	15	0	6	2.9	10	3.2	63	0	E	0	45	0.3				
10	0	**IC6606**		7	0.3	14	0.3	16	3.2	7	2.2	11	2.9	64	0.4	C	0	46	1.4				
11	4.4	1	0	8	0.3	15	0	**IC6612**		8	0.8	12	—	65	0	B	3.1	47	5.1				
12	3.6	2	3.3	9	0.4	16	0	1	3.3	9	0	13	3.1	66	0.5	**Q6603**		48	1.2				
13	1.8	3	0.2	10	0.4	17	0	2	3.2	10	0	14	3.2	67	2.9	E	5.2	49	4.7				
14	3.8	4	3.3	11	0	18	0	3	2.9	11	3.2	15	0	68	0	C	5.2	50	4.7				
15	4.5	5	3.3	12	0	19	2.0	4	3.0	12	3.2	16	0	69	3.3	B	5.9	51	0				
16	1.9	6	3.1	13	0	20	1.2	5	2.9	13	0	17	0	70	3.3			52	4.9				
17	3.3	7	3.3	14	0.7	21	2.8	6	3.3	14	0	18	0	71	0	**P6601**		53	5.1				
18	1.1	8	0	15	0.7	22	2.3	7	3.3	15	0.7	19	3.3	72	3.3	1	0	54	3.5				
19	0	9	3.0	16	0.6	23	1.1	8	0	16	0.3	20	3.3	73	3.3	2	0	55	0.3				
20	5.2	10	0	17	0.7	24	2.3	9	0	17	2.3	21	3.2	74	3.3	3	0	56	5.1				
IC6604		11	4.8	18	0.7	25	3.2	10	0	18	0.9	22	2.8	75	3.3	4	5.2	57	0.3				
1	0	12	0	19	0.3	26	0	11	0.1	19	2.7	23	3.2	76	0.4	5	0.8	58	0.3				
2	0.9	13	5.1	20	0.2	27	2.7	12	3.3	20	2.3	24	3.2	77	1.4	6	0.7	59	0.3				
3	0.7	14	4.9	21	0.2	28	0.9	13	3.3	21	1.1	25	3.2	78	2.8	7	0.7	60	0.3				
4	2.2	15	5.1	22	3.3	29	0.8	14	3.3	22	2.3	26	0.7	79	0	8	0.7	61	0.3				
5	3.0	16	5.1	23	3.3	30	2.2	15	0	23	2.8	27	0.2	80	0	9	0.7	62	0.3				
6	0.5	17	5.1	24	3.3	31	2.9	16	3.3	24	1.2	28	0.1	81	0	10	0.7	63	0.3				
7	2.5	18	5.1	**IC6609**		32	0.5	**IC6613**		25	2.0	29	0.6	82	0	11	0	64	0.3				
8	2.3	19	0	1	0	33	0	1	3.2	26	—	30	0.1	83	0	12	1.1	65	0				
9	2.7	20	5.2	2	5.2	34	0	2	1.1	27	0	31	0.1	84	3.2	13	5.2	66	0.3				
10	0	**IC6607**		3	5.2	35	0	3	3.2	28	2.8	32	0.2	85	3.2	14	3.3	67	0				

PC CARD SCHEMATIC DIAGARM

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L6604 4.7U
DGND
IC6602 74VHC32M1CX
R6731 22
R6730 22
R6615 47K
C6606 0.1
C6605 10/6.3V
R6687 47K
C6620 0.1
R6676 22
R6675 22
R6673 22
C6618 0.1
C6619 10/6.3V
IC6618 TC7WH08FUTEL
L6605 22U
IC6608 74LVX4245M1X
C6639 10/6.3V
C6614 0.1
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C6645 0.1
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R6759 22
R6750 22
R6751 22
R6676 0
R6674 47K
C6643 10/6.3V
C6615 0.1
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IC6606 TC74VHC541T
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R6767 22
R6774 22
R6775 22
R6782 22
R6783 22
R6790 22
R6791 22
C6608 10/10V
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C6609 0.1
C6640 10/10V
C6610 0.1
C6641 10/10V
C6611 0.1
C6642 10/10V
READY
WAIT
VS1
VS2
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R6623 47K
R6620 47K
R6619 47K
R6618 47K
R6617 47K
R6616 47K
R6610 47K
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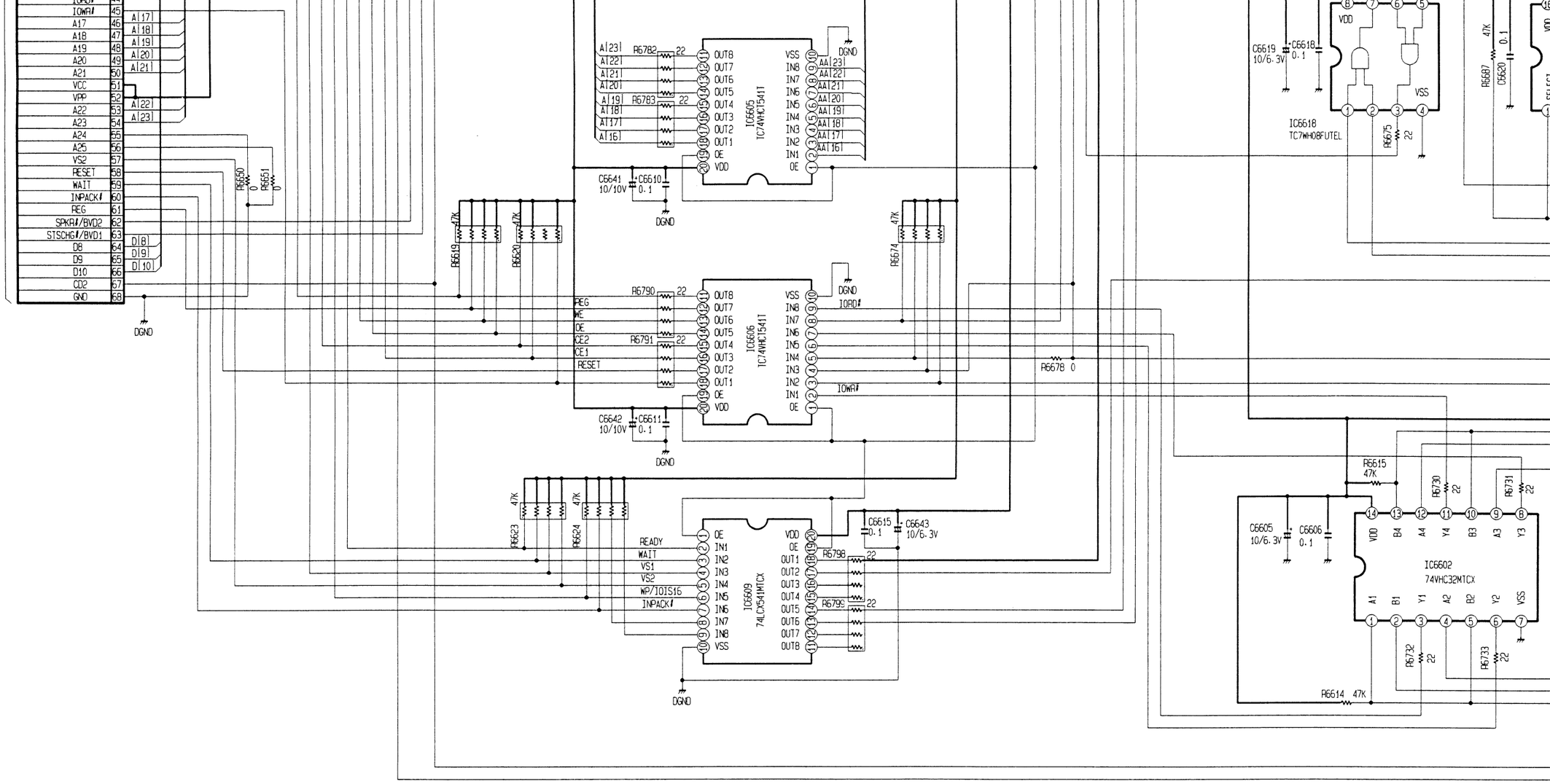
P6601
TO PC CARD SOCKET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REG
SPKR#/BVD2
STSCHG#/BVD1
D8
D9
D10
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TC74VHC15411
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R6783 22
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C6610 0.1
IC6606
R6790 22
R6791 22
REG
WE
OE
CE2
CE1
RESET
R6619 47K
R6620 47K
R6674 47K
IORD#
IOWR#
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C6611 0.1
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IC6609
74LCX541MTCX
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R6624 47K
READY
WAIT
VS1
VS2
WP/IOIS16
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C6618 0.1
R6675 22
R6687 47K
C6620 0.1
R6615 47K
C6605 10/6.3V
C6606 0.1
IC6602
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R6731 22
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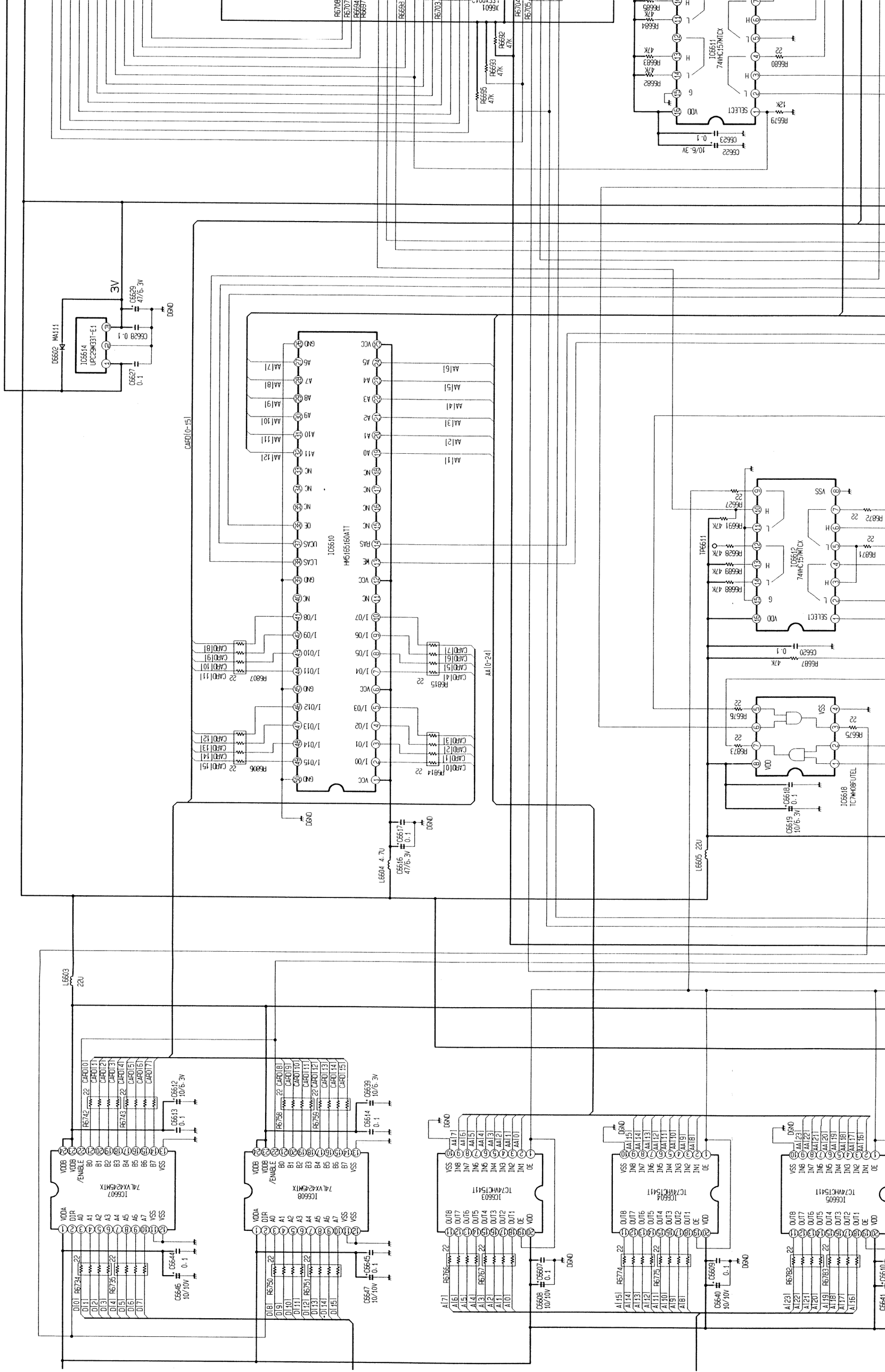
R6733 22
R6614 47K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AA[0-24]
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IC6608 74LVX245MTX
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L6605 22U
L6503 22U
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C6619 10/6.3V
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C6620 0.1
C6612 10/6.3V
C6613 0.1
C6614 0.1
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C6640 10/10V
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C6645 0.1
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C6607 0.1
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C6609 0.1
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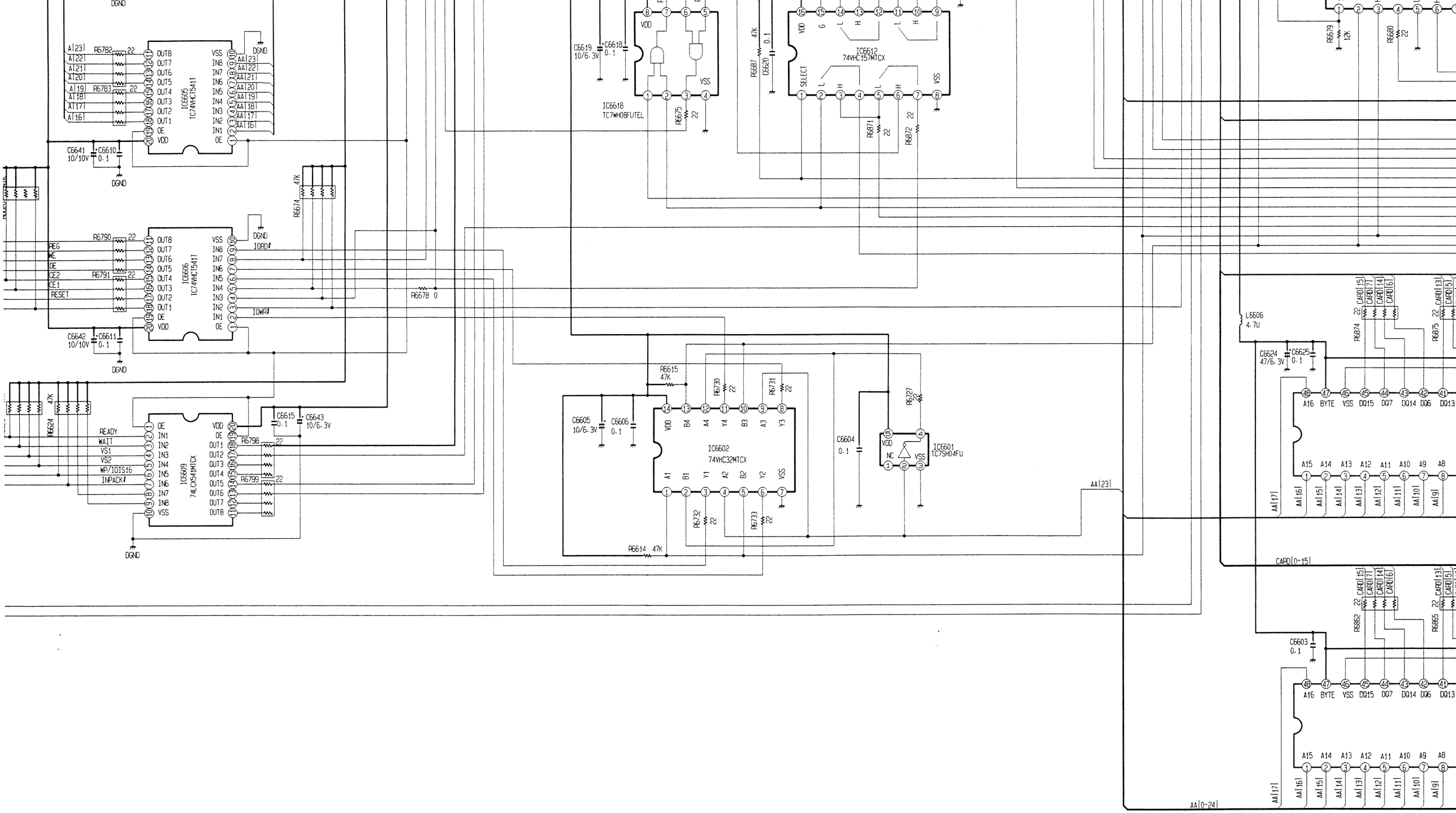
IC6601 TC7SH04FU
AA[0-24]


IC6605 TC74VHC541T
IC6606 TC74VHC541T
IC6609 74LCX541MTCX
IC6618 TC7WH08FUTEL
IC6612 74VHC157MTCX
IC6602 74VHC32MTCX
IC6601 TC7SH04FU
R6782 22
R6783 22
R6790 22
R6791 22
R6798 22
R6799 22
R6675 22
R6871 22
R6872 22
R6678 0
R6615 47K
R6614 47K
R6624 47K
R6674 47K
R6687 47K
C6610 0.1
C6611 0.1
C6615 0.1
C6618 0.1
C6619 10/6.3V
C6620 0.1
C6641 10/10V
C6642 10/10V
C6643 10/6.3V
C6605 10/6.3V
C6606 0.1
C6604 0.1
DGND
READY
WAIT
VS1
VS2
WP/IOIS16
INPACK#
REG
WE
RE
CE2
CE1
RESET
IORD#
IOWR#
AA[23]
AA[0-24]
AA[17]
CARD[0-15]
L6606 4.7U
C6624 47/6.3V
C6625 0.1
C6603 0.1
R6679 12K
R6680 22
R6874 22
R6875 22
R6862 22
R6865 22
A16 BYTE VSS DQ15 DQ7 DQ14 DQ6 DQ13
A15 A14 A13 A12 A11 A10 A9 A8

TO INPUT
TO DIGITAL
TO SYSTEM CONTROL
TO DIGITAL
TO SYSTEM CONTROL
SW6V_D
SW6V_D
CD_SCK
CARD_CS
CD_R
CD_B
CD_G
CD_RST
CD_WRITE
CD_EN
CD_READ
CD_GAMMA
SD_SCK_3
MS_DATA
SD_DATA_3
SD_DATA 3
SD_SCK 3
IC6615 74VHC32MTCX
IC6613 NJ3793-30
IC6617 M691101
IC6611 74VHC157MTCX
IC6614 UPC29M33T-E1
D6602 MA111
X6601 LSSX0012
TP6605
AA[0-24]
AVCC
DGND
3V

IC6617
MB91101

IC6611
74VHC157MTCX

IC6615
74VHC32MTCX

IC6613
MB3793-30

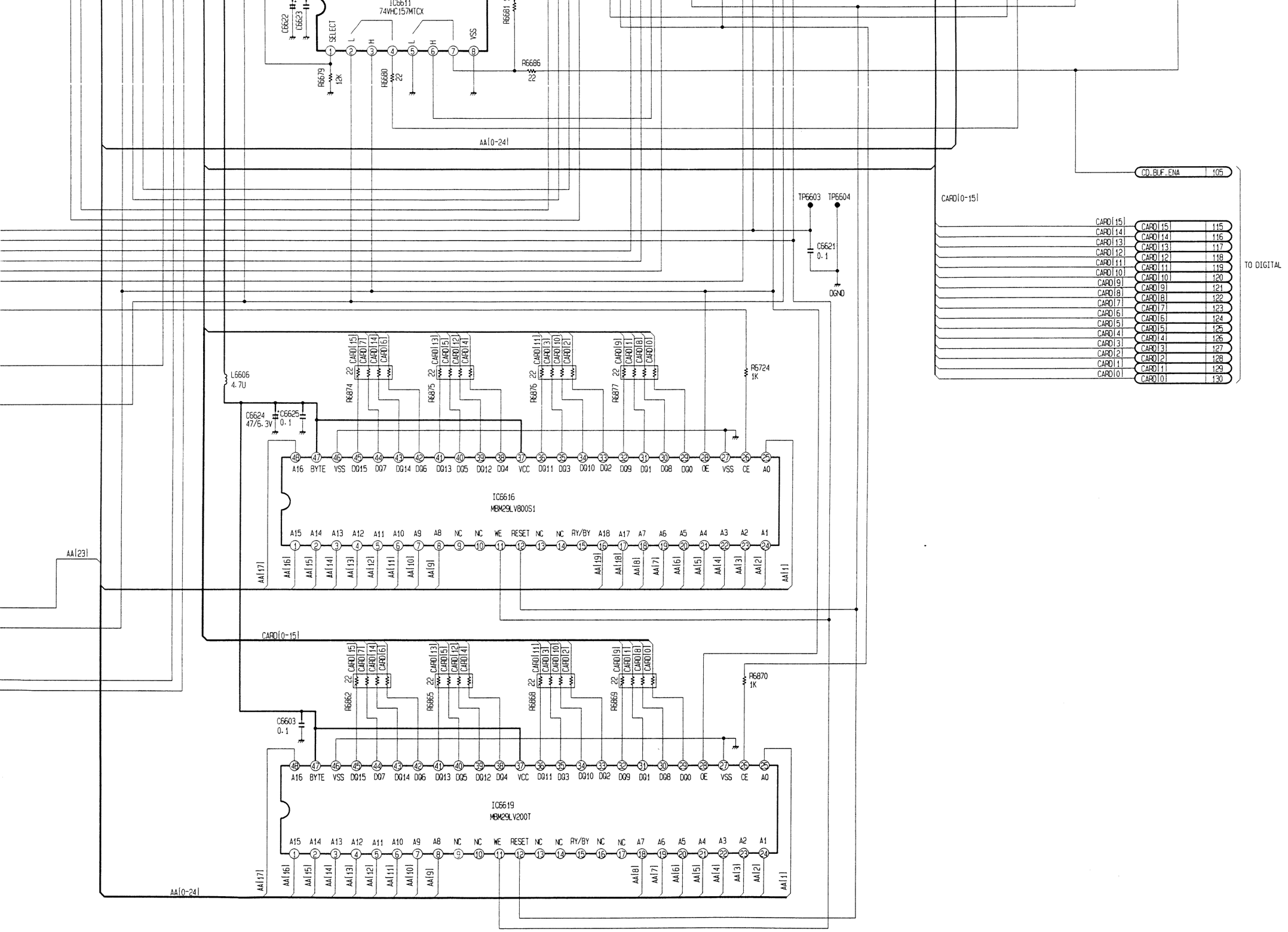
L6607
4.7U

L6606
4.7U

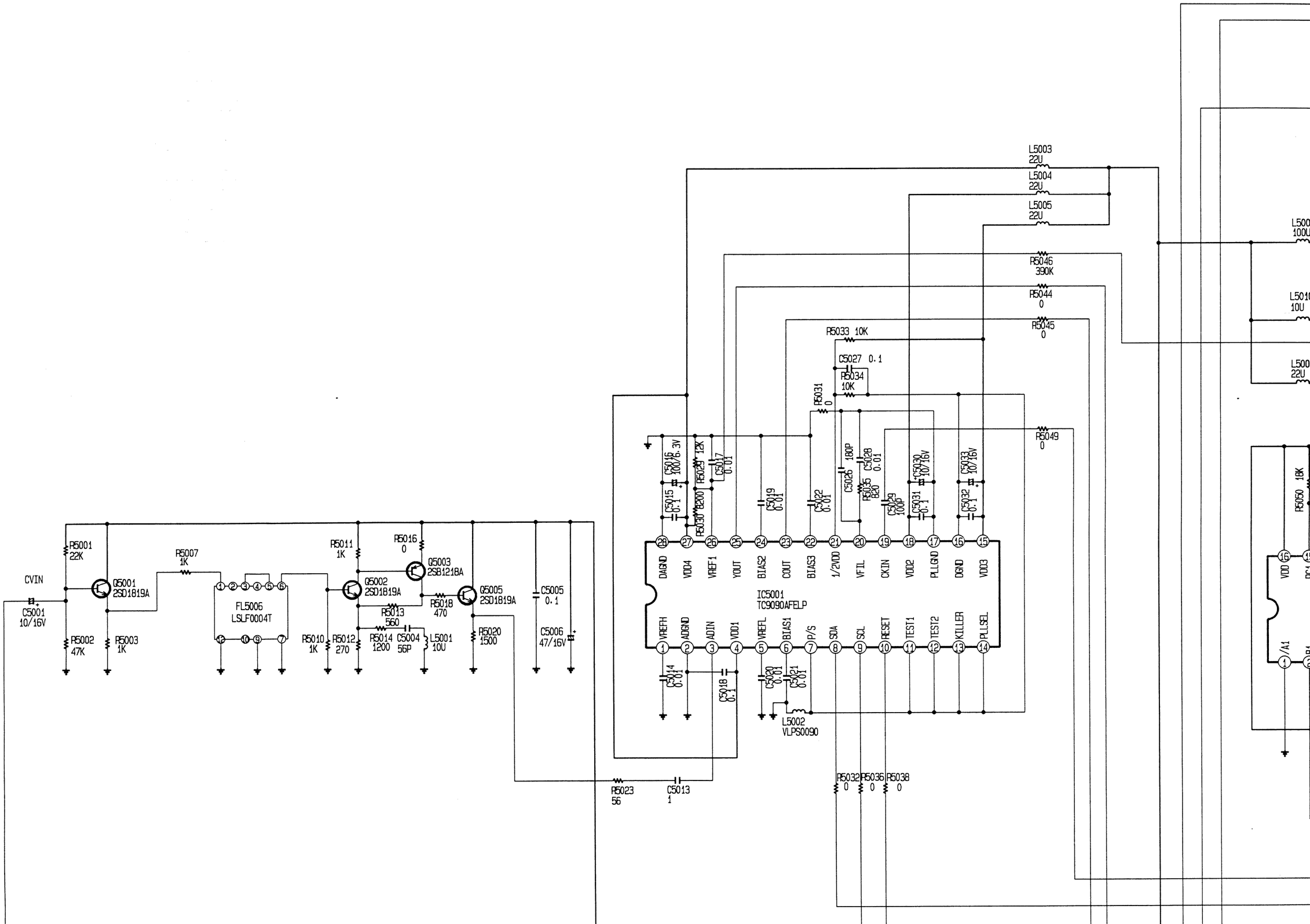
X6601
LSSX0012

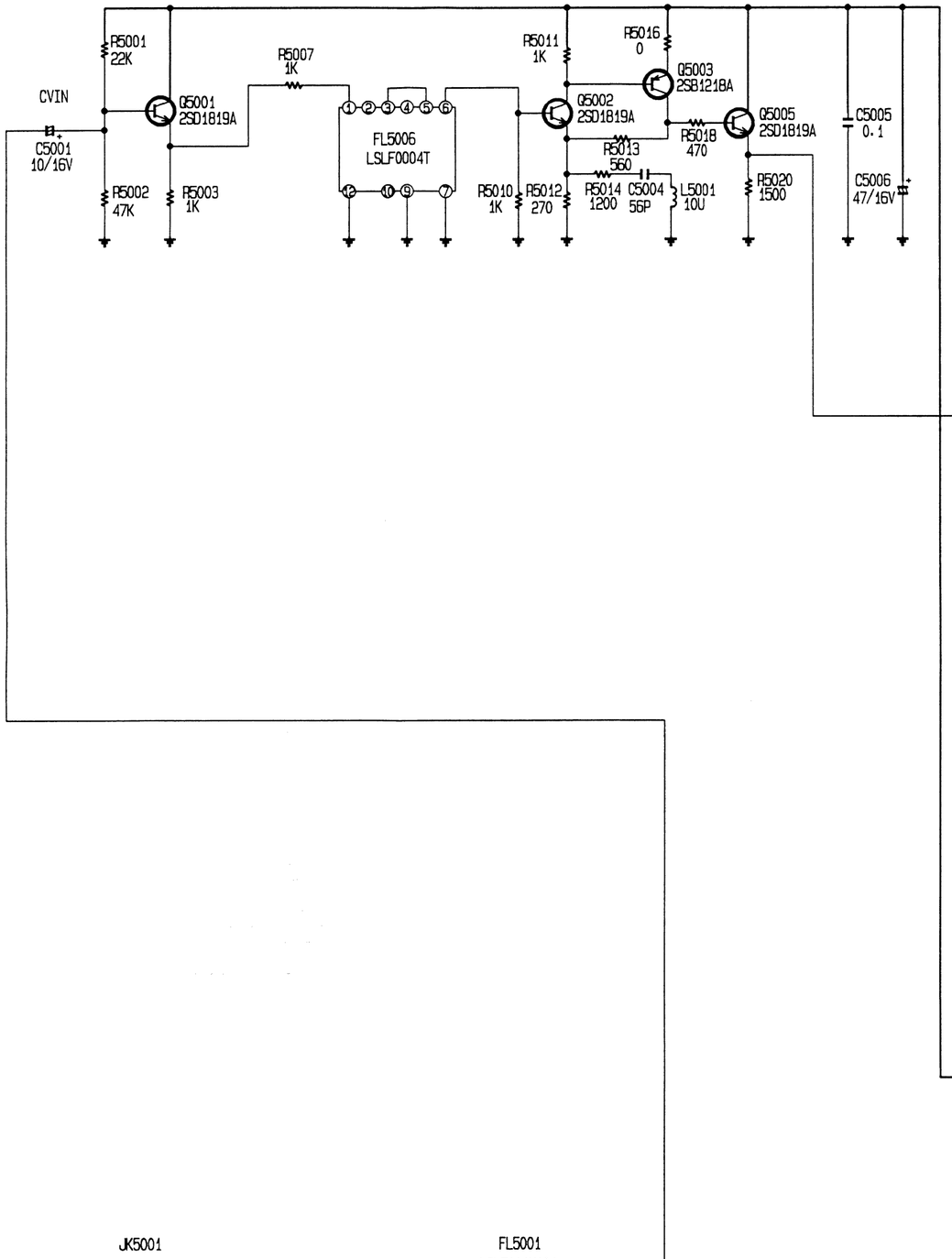
DGND

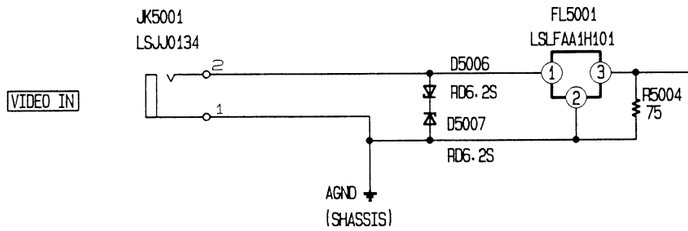
TO DIGITAL

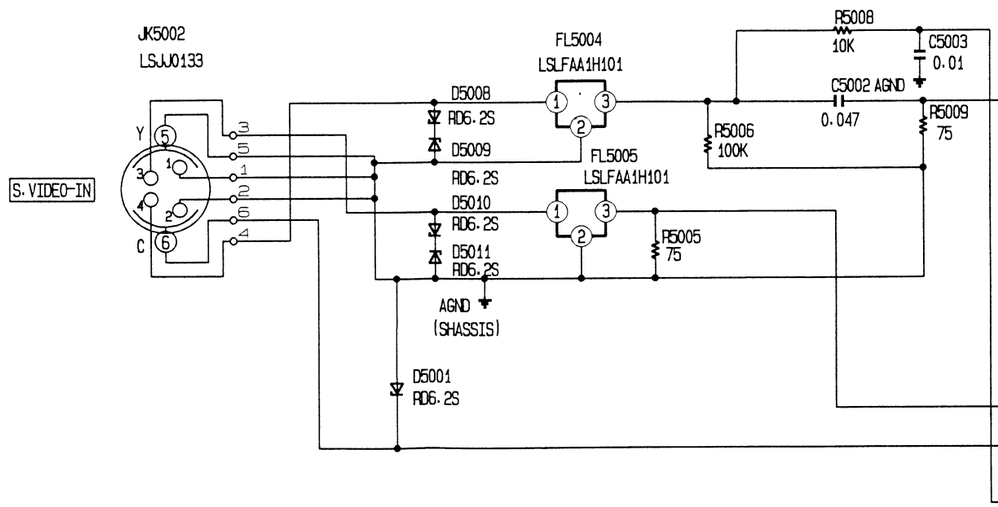

IC6611
74VHC157MTCX
SELECT
VSS
C6622
C6623
R6679 12K
R6680 22
R6681 22
R6686 22
AA[0-24]
CD_BUF_ENA 105
CARD[0-15]
CARD[15] 115
CARD[14] 116
CARD[13] 117
CARD[12] 118
CARD[11] 119
CARD[10] 120
CARD[9] 121
CARD[8] 122
CARD[7] 123
CARD[6] 124
CARD[5] 125
CARD[4] 126
CARD[3] 127
CARD[2] 128
CARD[1] 129
CARD[0] 130
TO DIGITAL
TP6603
TP6604
C6621 0.1
DGND
L6606 4.7U
C6624 47/6.3V
C6625 0.1
R6724 1K
R6874 22
R6875 22
R6876 22
R6877 22
A16 BYTE VSS DQ15 DQ7 DQ14 DQ6 DQ13 DQ5 DQ12 DQ4 VCC DQ11 DQ3 DQ10 DQ2 DQ9 DQ1 DQ8 DQ0 OE VSS CE A0
IC6616
MBM29LV800S1
A15 A14 A13 A12 A11 A10 A9 A8 NC NC WE RESET NC NC RY/BY A18 A17 A7 A6 A5 A4 A3 A2 A1
AA[17]
AA[16] AA[15] AA[14] AA[13] AA[12] AA[11] AA[10] AA[9] AA[19] AA[18] AA[8] AA[7] AA[6] AA[5] AA[4] AA[3] AA[2] AA[1]
AA[23]
CARD[0-15]
R6862 22
R6865 22
R6868 22
R6869 22
R6870 1K
C6603 0.1
IC6619
MBM29LV200T
A15 A14 A13 A12 A11 A10 A9 A8 NC NC WE RESET NC NC RY/BY NC NC A7 A6 A5 A4 A3 A2 A1
AA[0-24]

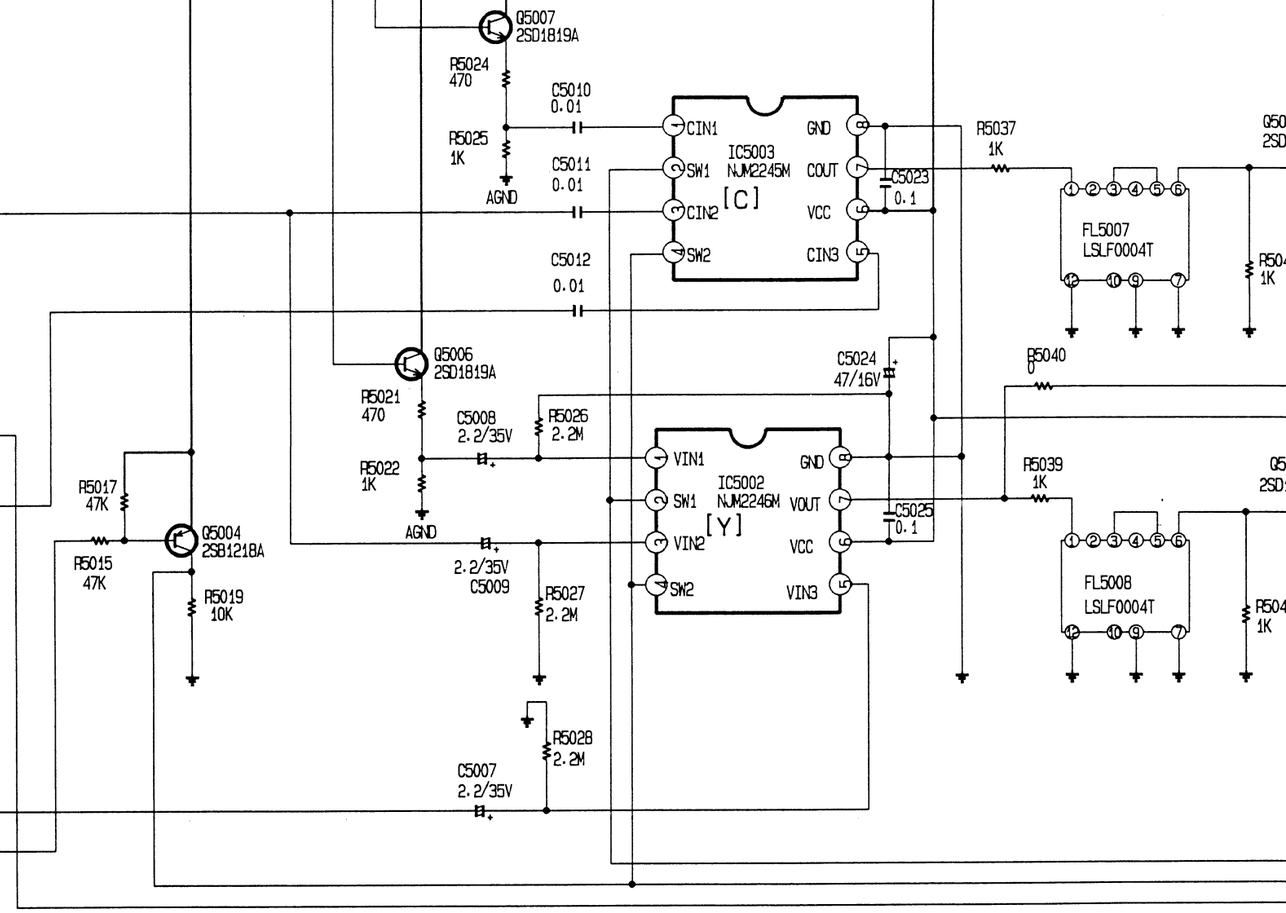
VIDEO SCHEMATIC DIAGARM

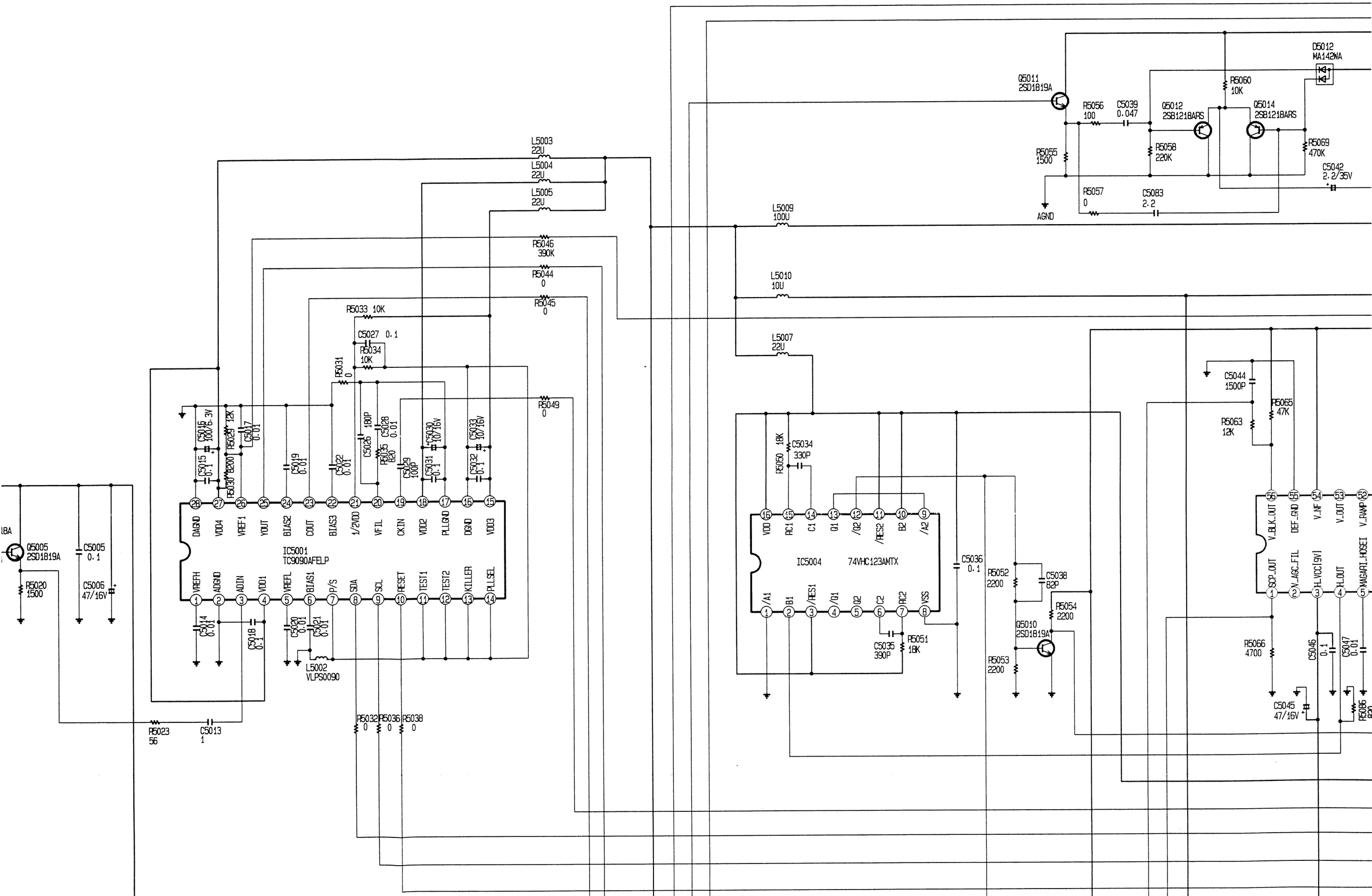



CVIN
C5001
10/16V
R5001
22K
R5002
47K
R5003
1K
Q5001
2SD1819A
R5007
1K
FL5006
LSLF0004T
R5010
1K
R5011
1K
R5012
270
R5016
0
Q5002
2SD1819A
R5013
560
R5014
1200
C5004
56P
L5001
10U
Q5003
2SB1218A
R5018
470
Q5005
2SD1819A
R5020
1500
C5005
0.1
C5006
47/16V
R5023
56
C5013
1
R5044
0
R5045
0
R5033 10K
C5027 0.1
R5034
10K
R5031
0
R5049
0
C5016
100/6.3V
R5029 12K
C5017
0.01
R5030 6200
C5015
0.1
C5019
0.01
C5022
0.01
C5026 180P
R5035
820
C5028
0.01
C5029
100P
C5030
100/16V
C5031
0.1
C5033
100/16V
C5032
0.1
DAGND
VDD4
VREF1
VOUT
BIAS2
COUT
BIAS3
1/2VDD
VFIL
CKIN
VDD2
PLLGND
DGND
VDD3
IC5001
TC9090AFELP
VREFH
AGND
ADIN
VDD1
VREFL
BIAS1
P/S
SDA
SCL
RESET
TEST1
TEST2
KILLER
PLLSEL
C5014
0.01
C5018
0.1
C5020
0.01
C5021
0.01
L5002
VLPS0090
R5032
0
R5036
0
R5038
0
R5050 18K
VDD
/A1
JK5001
LSJJ0134
FL5001
LSLFAA1H101
Q5007
2SD1819A
R5024
470
R5025
1K
C5010
0.01
C5011
0.01
AGND
CIN1
SW1
IC5003
NJM2245M
GND
COUT
C5023
R5037
1K


JK5001
LSJJ0134
VIDEO IN
2
1
D5006
RD6.2S
D5007
RD6.2S
FL5001
LSLFAA1H101
R5004
75
AGND
(SHASSIS)


JK5002
LSJJ0133
S.VIDEO-IN
Y
C
3
5
1
6
2
4
D5008
RD6.2S
D5009
RD6.2S
D5010
RD6.2S
D5011
RD6.2S
FL5004
LSLFAA1H101
FL5005
LSLFAA1H101
R5008
10K
C5003
0.01
C5002 AGND
0.047
R5009
75
R5006
100K
R5005
75
AGND
(SHASSIS)
D5001
RD6.2S


Q5007
2SD1819A
R5024
470
R5025
1K
AGND
C5010
0.01
C5011
0.01
C5012
0.01
IC5003
NJM2245M
[C]
CIN1
SW1
CIN2
SW2
GND
COUT
VCC
CIN3
C5023
0.1
R5037
1K
FL5007
LSLF0004T
Q5006
2SD1819A
R5021
470
R5022
1K
AGND
C5008
2.2/35V
R5026
2.2M
C5009
2.2/35V
R5027
2.2M
C5007
2.2/35V
R5028
2.2M
R5017
47K
R5015
47K
Q5004
2SB1218A
R5019
10K
IC5002
NJM2246M
[Y]
VIN1
SW1
VIN2
SW2
GND
VOUT
VCC
VIN3
C5024
47/16V
C5025
0.1
R5040
0
R5039
1K
FL5008
LSLF0004T


L5003 22U
L5004 22U
L5005 22U
R5046 390K
R5044 0
R5045 0
R5033 10K
C5027 0.1
R5034 10K
R5031 0
R5049 0
C5015 100/6.3V
R5030 12K
R5029 12K
C5017 0.01
C5019 0.01
C5022 0.01
C5026 180P
R5035 820
C5028 0.01
C5029 100P
C5030 10/16V
C5031 0.1
C5032 0.1
C5033 10/16V
IC5001
TC9090AFELP
DAGND VDD4 VREF1 YOUT BIAS2 COUT BIAS3 1/2VDD VFIL CKIN VDD2 PLLGND DGND VDD3
VREFH AGND ADIN VDD1 VREFL BIAS1 P/S SDA SCL RESET TEST1 TEST2 KILLER PLLSEL
C5014 0.01
C5018 0.1
C5020 0.01
C5021 0.01
L5002 VLPS0090
R5032 0
R5036 0
R5038 0
R5023 56
C5013 1
Q5005 2SD1819A
C5005 0.1
R5020 1500
C5006 47/16V
L5009 100U
L5010 10U
L5007 22U
Q5011 2SD1819A
R5056 100
C5039 0.047
Q5012 2SB1218ARS
Q5014 2SB1218ARS
D5012 MA142WA
R5060 10K
R5055 1500
R5058 220K
R5069 470K
C5042 2.2/35V
R5057 0
C5083 2.2
AGND
R5050 18K
C5034 330P
IC5004 74VHC123AMTX
VDD RC1 C1 Q1 /Q2 /RES2 B2 /A2
/A1 B1 /RES1 /Q1 Q2 C2 RC2 VSS
C5036 0.1
C5035 390P
R5051 18K
R5052 2200
C5038 82P
R5054 2200
Q5010 2SD1819A
R5053 2200
C5044 1500P
R5065 47K
R5063 12K
V_BLK_OUT DEF_GND V_INF V_OUT V_RAMP
SCP_OUT V_AGC_FIL HL_VCC(9V) HL_OUT MAGART_HOSEI
R5066 4700
C5046 0.1
C5047 0.01
C5045 47/16V
R5086 820

C5027 0.1
R5034 10K
R5031 0
R5049 0
C5016 100/6.3V
R5029 12K
C5017 0.01
C5015 0.1
R5030 6200
C5019 0.01
C5022 0.01
C5026 180P
R5035 820
C5028 0.01
C5029 100P
C5030 10/16V
C5031 0.1
C5033 10/16V
C5032 0.1

IC5001
TC9090AFELP
DAGND VDD4 VREF1 YOUT BIAS2 COUT BIAS3 1/2VDD VFIL CKIN VDD2 PLLGND DGND VDD3
VREFH ADGND ADIN VDD1 VREFL BIAS1 P/S SDA SCL RESET TEST1 TEST2 KILLER PLLSEL

C5014 0.01
C5018 0.1
C5020 0.01
C5021 0.01
L5002 VLPS0090

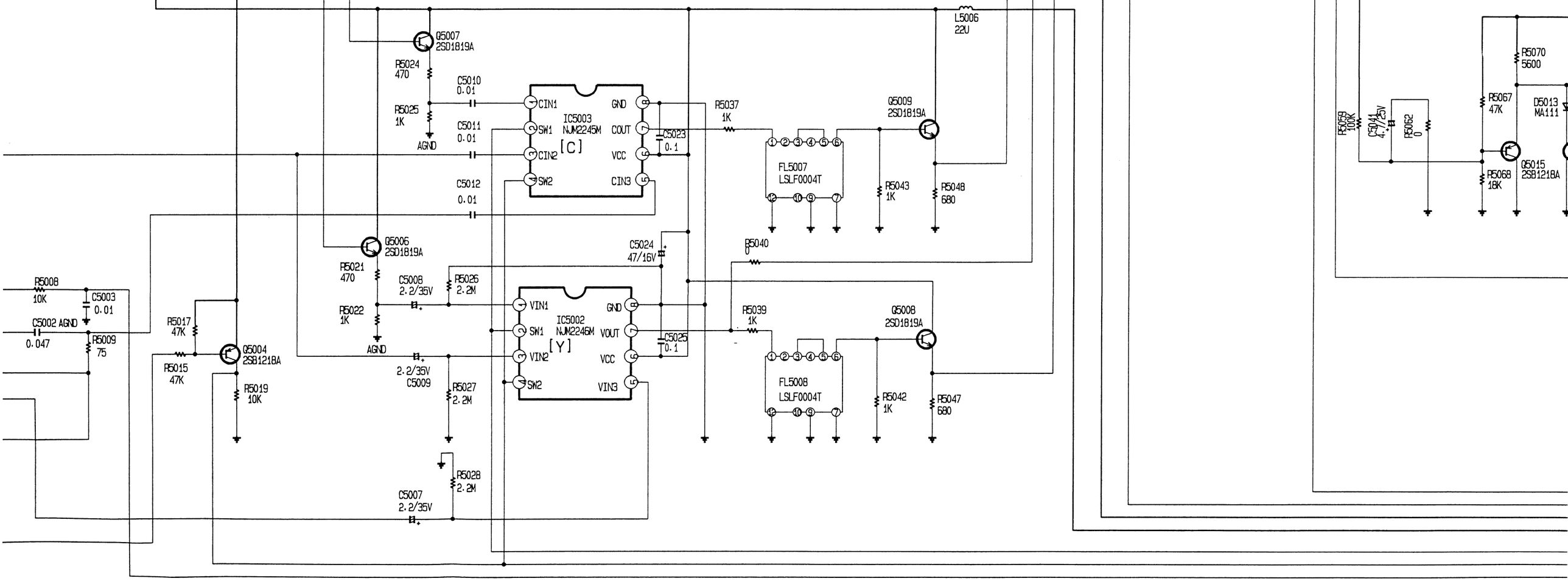
Q5005 2SD1819A
C5005 0.1
R5020 1500
C5006 47/16V
R5023 56
C5013 1
R5032 0
R5036 0
R5038 0

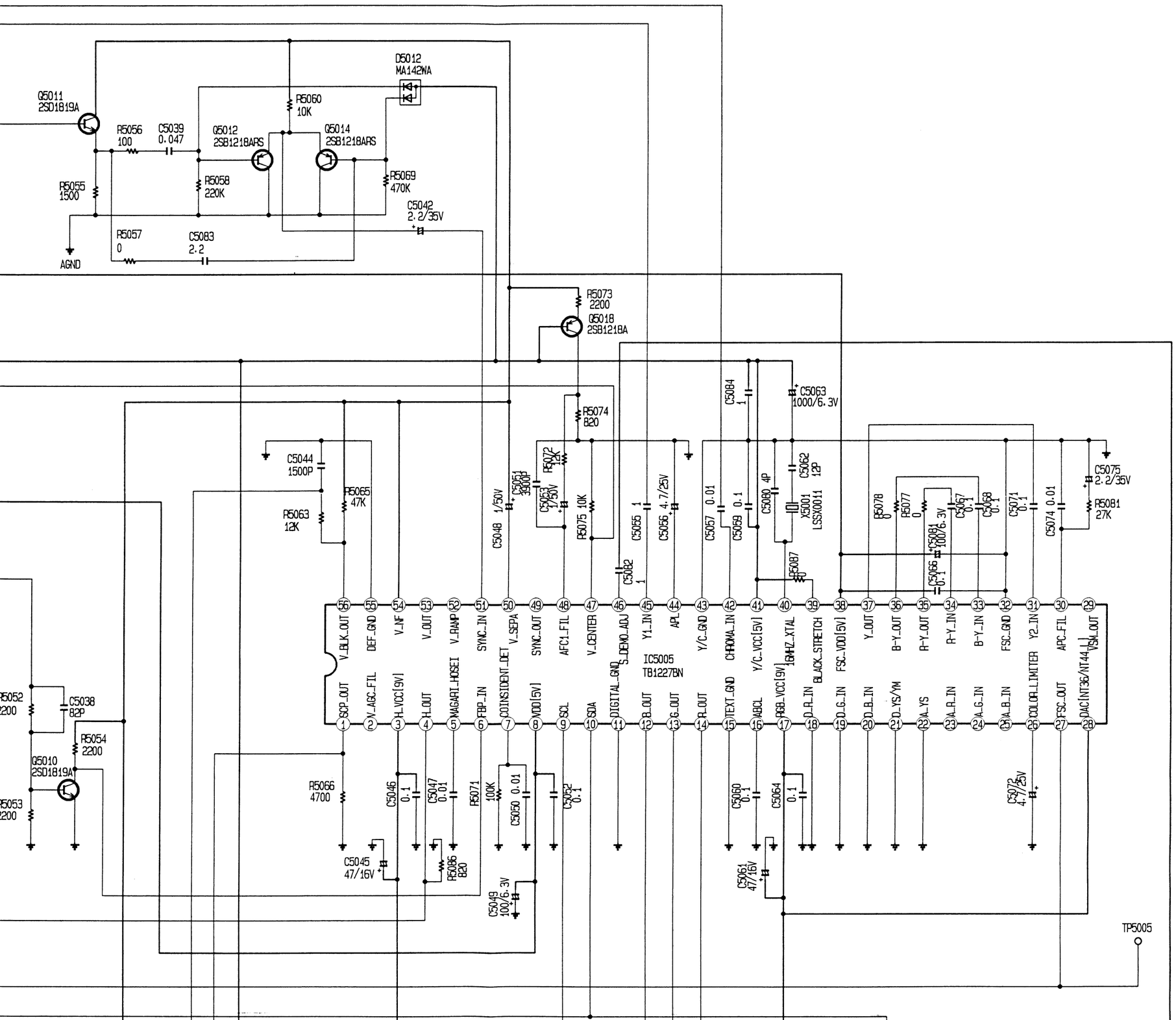
L5007 22U
R5050 18K
C5034 330P
IC5004 74VHC123AMTX
VDD RC1 C1 Q1 /Q2 /RES2 B2 /A2
/A1 B1 /RES1 /Q1 Q2 C2 RC2 VSS
C5036 0.1
C5035 390P
R5051 18K
R5052 2200
C5038 82P
R5054 2200
Q5010 2SD1819A
R5053 2200

C5044 1500P
R5065 47K
R5063 12K
V_BLK_OUT DEF_GND V_INF V_OUT V_RAMP
SCP_OUT V_AGC_FIL H_VCC[9V] H_OUT MAGARI_HOSEI
R5066 4700
C5046 0.1
C5047 0.01
C5045 47/16V
R5086 82

Q5007 2SD1819A
R5024 470
R5025 1K
AGND
C5010 0.01
C5011 0.01
C5012 0.01
IC5003
NJM2245M
[C]
CIN1 SW1 CIN2 SW2 GND COUT VCC CIN3
C5023 0.1
R5037 1K
FL5007 LSLF0004T
L5006 22U
Q5009 2SD1819A
R5043 1K
R5048 680

R5059 100K
C5041 4.7/25V
R5062 0
R5070 5600
R5067 47K
D5013 MA111
Q5015 2SB1218A
R5068 18K

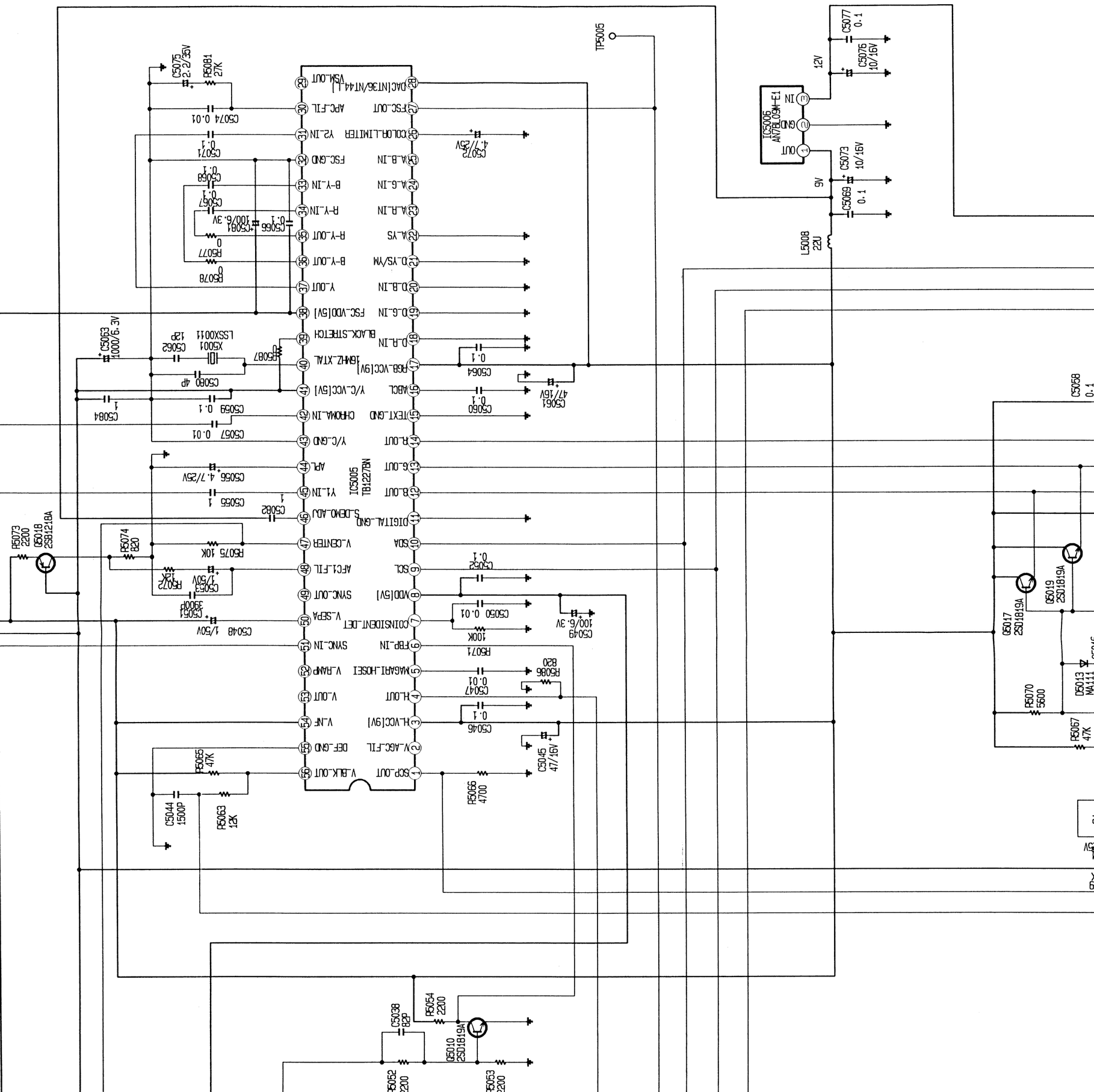

Q5007
2SD1819A
R5024
470
R5025
1K
AGND
C5010
0.01
C5011
0.01
C5012
0.01
IC5003
NJM2245M
[C]
CIN1
SW1
CIN2
SW2
GND
COUT
VCC
CIN3
C5023
0.1
R5037
1K
L5006
22U
Q5009
2SD1819A
FL5007
LSLF0004T
R5043
1K
R5048
680
Q5006
2SD1819A
R5021
470
R5022
1K
AGND
C5008
2.2/35V
R5026
2.2M
C5024
47/16V
B5040
0
R5008
10K
C5003
0.01
C5002 AGND
0.047
R5009
75
R5017
47K
R5015
47K
Q5004
2SB1218A
R5019
10K
2.2/35V
C5009
R5027
2.2M
R5028
2.2M
C5007
2.2/35V
IC5002
NJM2246M
[Y]
VIN1
SW1
VIN2
SW2
GND
VOUT
VCC
VIN3
C5025
0.1
R5039
1K
Q5008
2SD1819A
FL5008
LSLF0004T
R5042
1K
R5047
680
R5059
100K
C5014
4.7/25V
R5062
0
R5070
5600
R5067
47K
D5013
MA111
Q5015
2SB1218A
R5068
18K



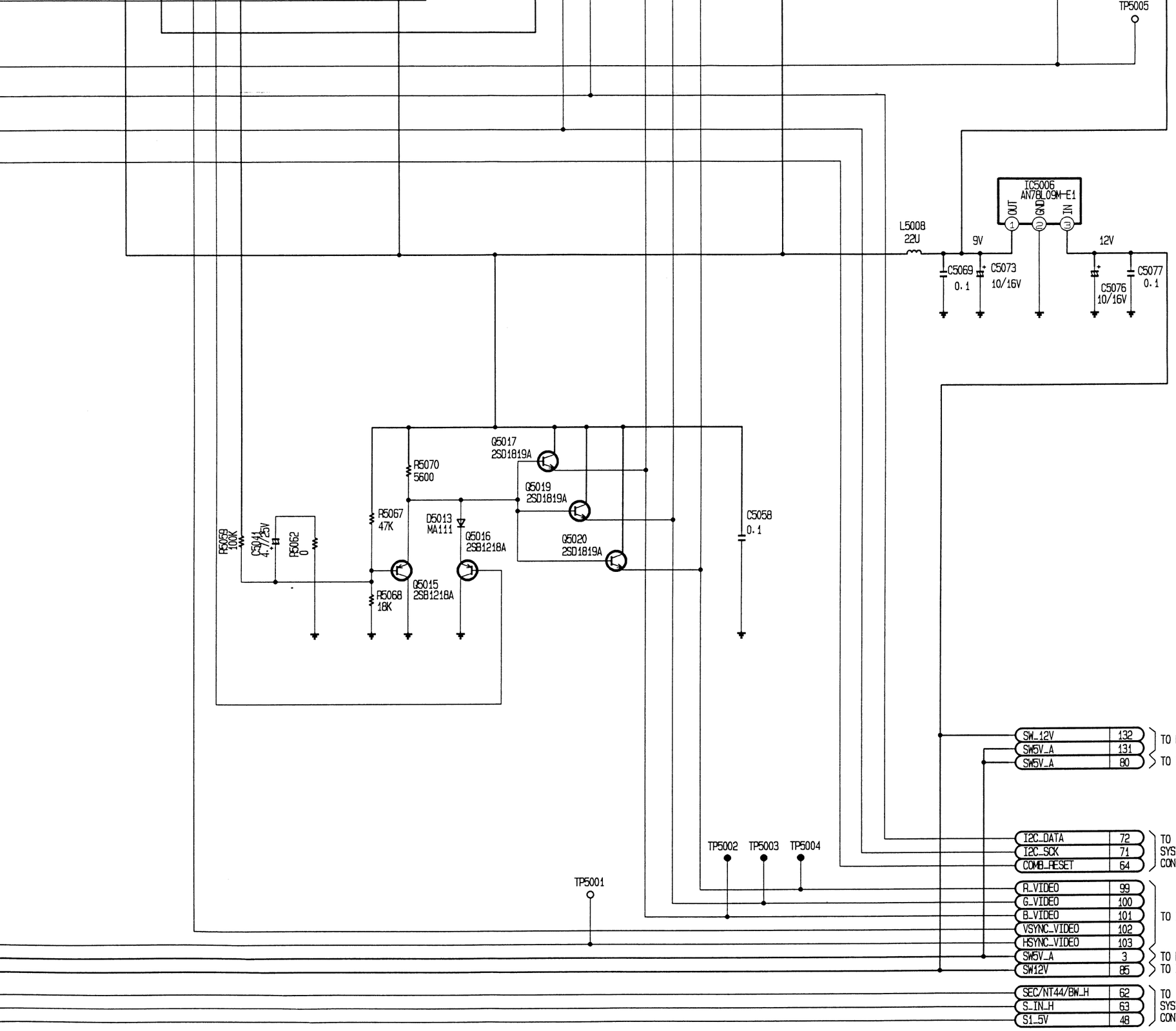
VOLTAGE CHART

PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
IC5001		44	2.3
1	3.5	45	2.1
2	0	46	3.0
3	1.8	47	3.5
4	5.0	48	5.0
5	1.5	49	0.2
6	1.4	50	5.2
7	0	51	2.2
8	4.7	52	2.8
9	4.6	53	3.4
10	0	54	8.7
11	0	55	0
12	0	56	4.6
13	0	**IC5006**	
14	0	1	9.0
15	5.1	2	0
16	0	3	12.1
17	0		
18	5.1	**Q5001**	
19	2.5	E	7.0
20	1.8	C	11.9
21	2.5	B	7.6
22	3.6	**Q5002**	
23	3.2	E	2.9
24	1.7	C	11.2
25	3.2	B	3.5
26	3.0	**Q5003**	
27	5.0	E	11.9
28	0	C	8.4
IC5002		B	11.2
1	5.1	**Q5004**	
2	0	E	5.1
3	5.1	C	0
4	5.1	B	5.0
5	5.5	**Q5005**	
6	11.9	E	7.7
7	5.4	C	11.9
8	0	B	8.4
IC5003		**Q5006**	
1	8.0	E	2.6
2	0	C	11.9
3	8.0	B	3.2
4	5.1	**Q5007**	
5	8.0	E	2.6
6	11.9	C	11.9
7	6.2	B	3.2
8	0	**Q5008**	
IC5004		E	1.7
1	0	C	11.9
2	1.9	B	2.3
3	4.9	**Q5009**	
4	4.3	E	2.5
5	0.6	C	11.9
6	0	B	3.1
7	4.3	**Q5010**	
8	0	E	0
9	0.5	C	0.9
10	4.9	B	0.6
11	4.9	**Q5011**	
12	4.2	E	4.1
13	0.6	C	8.7
14	0	B	4.7
15	4.3	**Q5012**	
16	4.9	E	5.2
IC5005		C	0
1	1.2	B	4.6
2	0.5	**Q5013**	
3	8.7	E	5.5
4	1.9	C	1.9
5	4.4	B	4.9
6	0.9	**Q5014**	
7	0.1	E	5.2
8	4.9	C	0
9	4.6	B	4.7
10	4.7	**Q5015**	
11	0	E	2.0
12	2.7	C	0
13	2.7	B	2.7
14	2.7	**Q5016**	
15	0	E	1.5
16	6.2	C	0
17	8.7	B	1.2
18	0	**Q5017**	
19	0	E	2.7
20	0	C	8.7
21	0	B	2.0
22	0	**Q5018**	
23	4.3	E	5.5
24	4.3	C	1.2
25	4.3	B	4.9
26	2.4	**Q5019**	
27	2.6	E	2.7
28	8.7	C	8.7

24	1.7	C	11.2
25	3.2	B	3.5
26	3.0	Q5003	
27	5.0	E	11.9
28	0	C	8.4
IC5002		B	11.2
1	5.1	Q5004	
2	0	E	5.1
3	5.1	C	0
4	5.1	B	3.0
5	5.5	Q5005	
6	11.9	E	7.7
7	5.4	C	11.9
8	0	B	8.4
IC5003		Q5006	
1	8.0	E	2.6
2	0	C	11.9
3	8.0	B	3.2
4	5.1	Q5007	
5	8.0	E	2.6
6	11.9	C	11.9
7	6.2	B	3.2
8	0	Q5008	
IC5004		E	1.7
1	0	C	11.9
2	1.9	B	2.3
3	4.9	Q5009	
4	4.3	E	2.5
5	0.6	C	11.9
6	0	B	3.1
7	4.3	Q5010	
8	0	E	0
9	0.5	C	0.9
10	4.9	B	0.6
11	4.9	Q5011	
12	4.2	E	4.1
13	0.6	C	8.7
14	0	B	4.7
15	4.3	Q5012	
16	4.9	E	5.2
IC5005		C	0
1	1.2	B	4.6
2	0.5	Q5013	
3	8.7	E	5.5
4	1.9	C	1.9
5	4.4	B	4.9
6	0.9	Q5014	
7	0.1	E	5.2
8	4.9	C	0
9	4.6	B	4.7
10	4.7	Q5015	
11	0	E	2.0
12	2.7	C	0
13	2.7	B	2.7
14	2.7	Q5016	
15	0	E	1.5
16	6.2	C	0
17	8.7	B	1.2
18	0	Q5017	
19	0	E	2.7
20	0	C	8.7
21	0	B	2.0
22	0	Q5018	
23	4.3	E	5.5
24	4.3	C	1.2
25	4.3	B	4.9
26	2.4	Q5019	
27	2.6	E	2.7
28	8.7	C	8.7
29	0.5	B	2.0
30	3.0	Q5020	
31	1.9	E	2.7
32	0	C	8.7
33	2.4	B	2.0
34	2.4	Q5022	
35	1.7	E	0
36	1.7	C	0.2
37	2.0	B	0
38	4.9		
39	4.9	TP5001	4.2
40	3.9	TP5002	2.7
41	4.9	TP5003	2.7
42	3.4	TP5004	2.7
43	0	TP5005	2.6

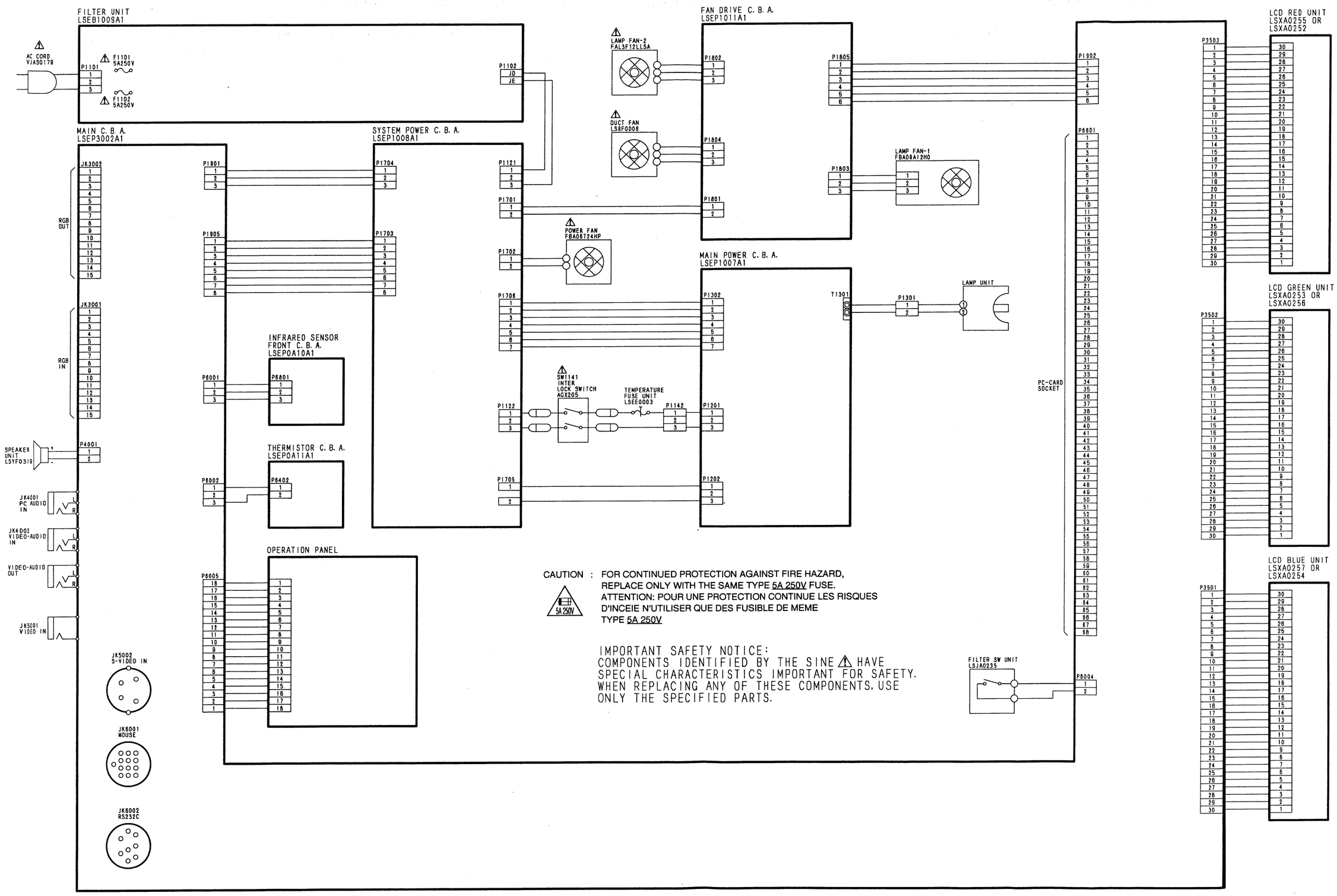


20	0	C	8.7
21	0	B	2.0
22	0	**Q5018**	
23	4.3	E	5.5
24	4.3	C	1.2
25	4.3	B	4.9
26	2.4	**Q5019**	
27	2.6	E	2.7
28	8.7	C	8.7
29	0.5	B	2.0
30	3.0	**Q5020**	
31	1.9	E	2.7
32	0	C	8.7
33	2.4	B	2.0
34	2.4	**Q5022**	
35	1.7	E	0
36	1.7	C	0.2
37	2.0	B	0
38	4.9		
39	4.9	**TP5001**	4.2
40	3.9	**TP5002**	2.7
41	4.9	**TP5003**	2.7
42	3.4	**TP5004**	2.7
43	0	**TP5005**	2.6



Note:
The Schematic diagram of Main Power
System Power C.B.A., Fan Drive C.B.A.
ter Unit is not included in this Service Ma
Because, these Circuit Board Assembl
supplied as a unit (C.B.A.) only.

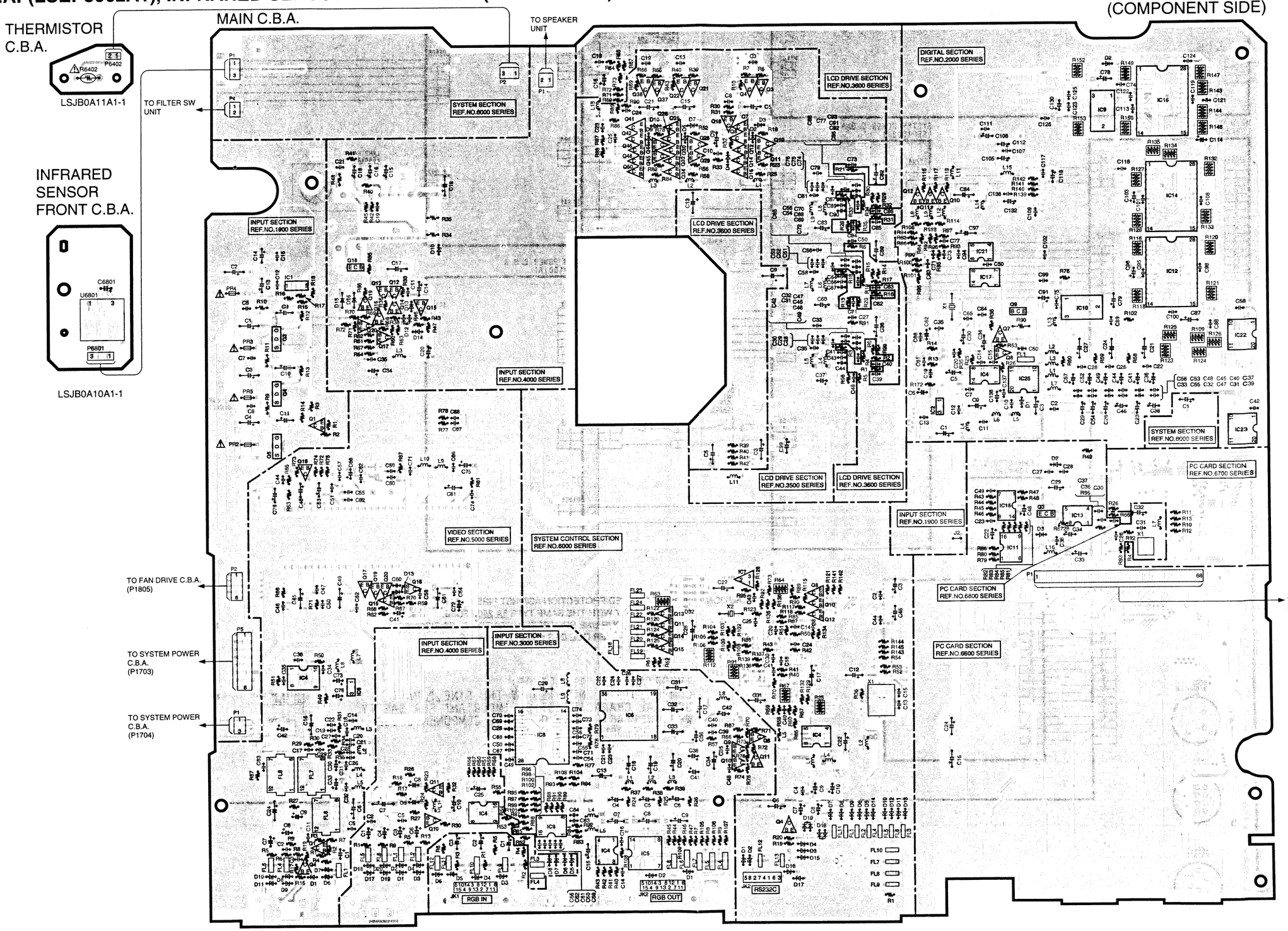
INTERCONNECTION SCHEMATIC DIAGRAM



CIRCUIT BOARDS

MAIN C.B.A. (LSEP3002A1), INFRARED SENSOR FRONT C.B.A. (LESP0A10A1) AND THERMISTOR C.B.A. (LSEP0A11A1)

(COMPONENT SIDE)



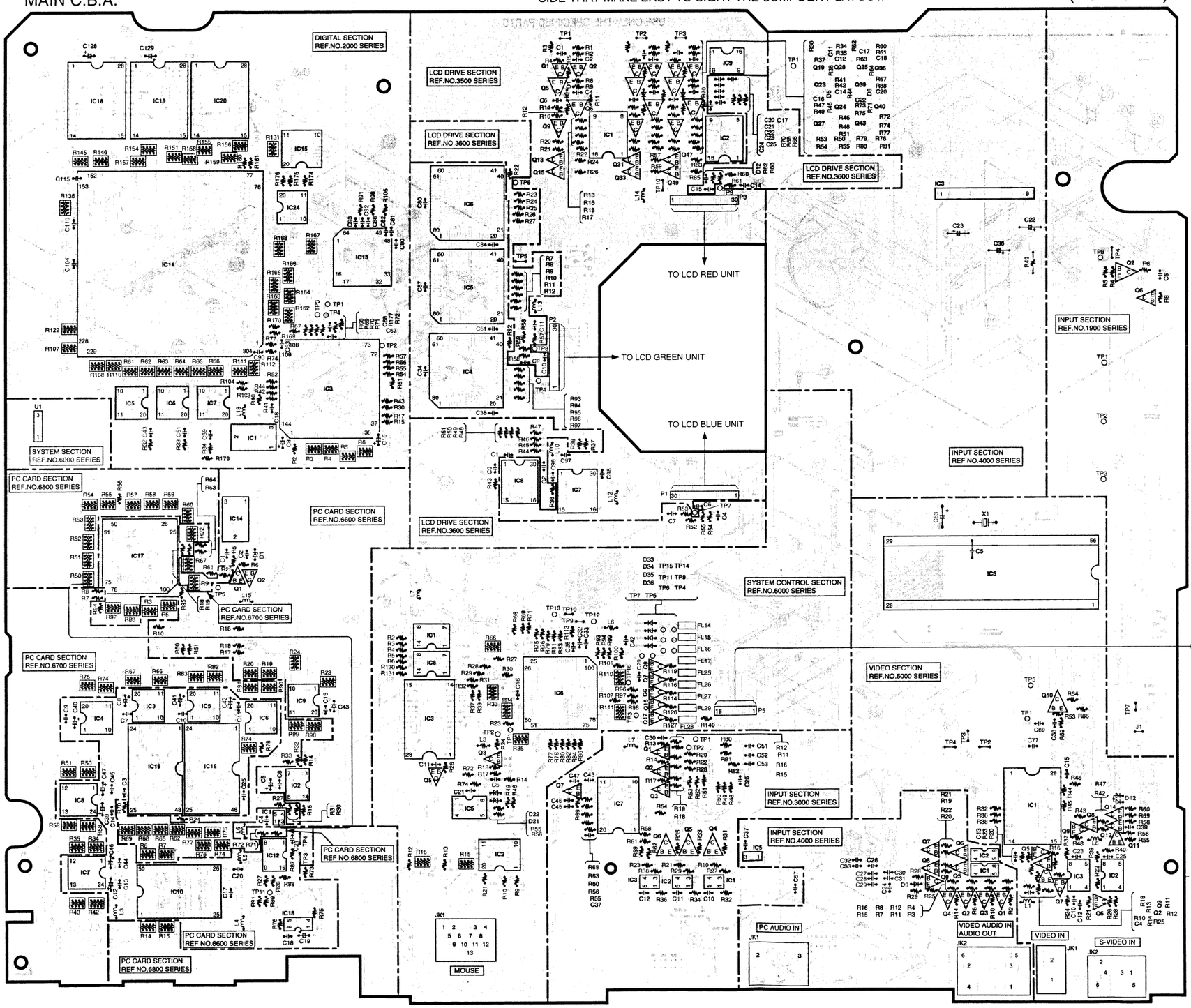
(QUADRUPLE PATTERNS)

NOTE: QUADRUPLE PATTERNS C.B.A.

THIS C.B.A. IS QUADRUPLE PATTERNS C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPOENT LAYOUT.

MAIN C.B.A.

(FOIL SIDE)



(QUADRUPLE PATTERNS)

LSJB3002-1

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE SINE ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE: REF.NO. ON MAIN C.B.A. IS ABBEWVIATED AS FOLLOWS.

REF.NO.1900 SERIES (R1902 IS ABBREVIATED TO R2)
REF.NO.2000 SERIES (R2002 IS ABBREVIATED TO R2)
REF.NO.3000 SERIES (R3002 IS ABBREVIATED TO R2)
REF.NO.3500 SERIES (R3502 IS ABBREVIATED TO R2)
REF.NO.3600 SERIES (R3602 IS ABBREVIATED TO R2)
REF.NO.4000 SERIES (R4002 IS ABBREVIATED TO R2)
REF.NO.6000 SERIES (R6002 IS ABBREVIATED TO R2)
REF.NO.6600 SERIES (R6602 IS ABBREVIATED TO R2)
REF.NO.6700 SERIES (R6702 IS ABBREVIATED TO R2)
REF.NO.6800 SERIES (R6802 IS ABBREVIATED TO R2)

Note:

The Circuit Board diagram of Main Power C.B.A., System Power C.B.A., Fan Drive C.B.A. and Filter unit is not included in this Service Manual.
Because, these Circuit Board Assemblies are supplied as a unit (C.B.A.) only.

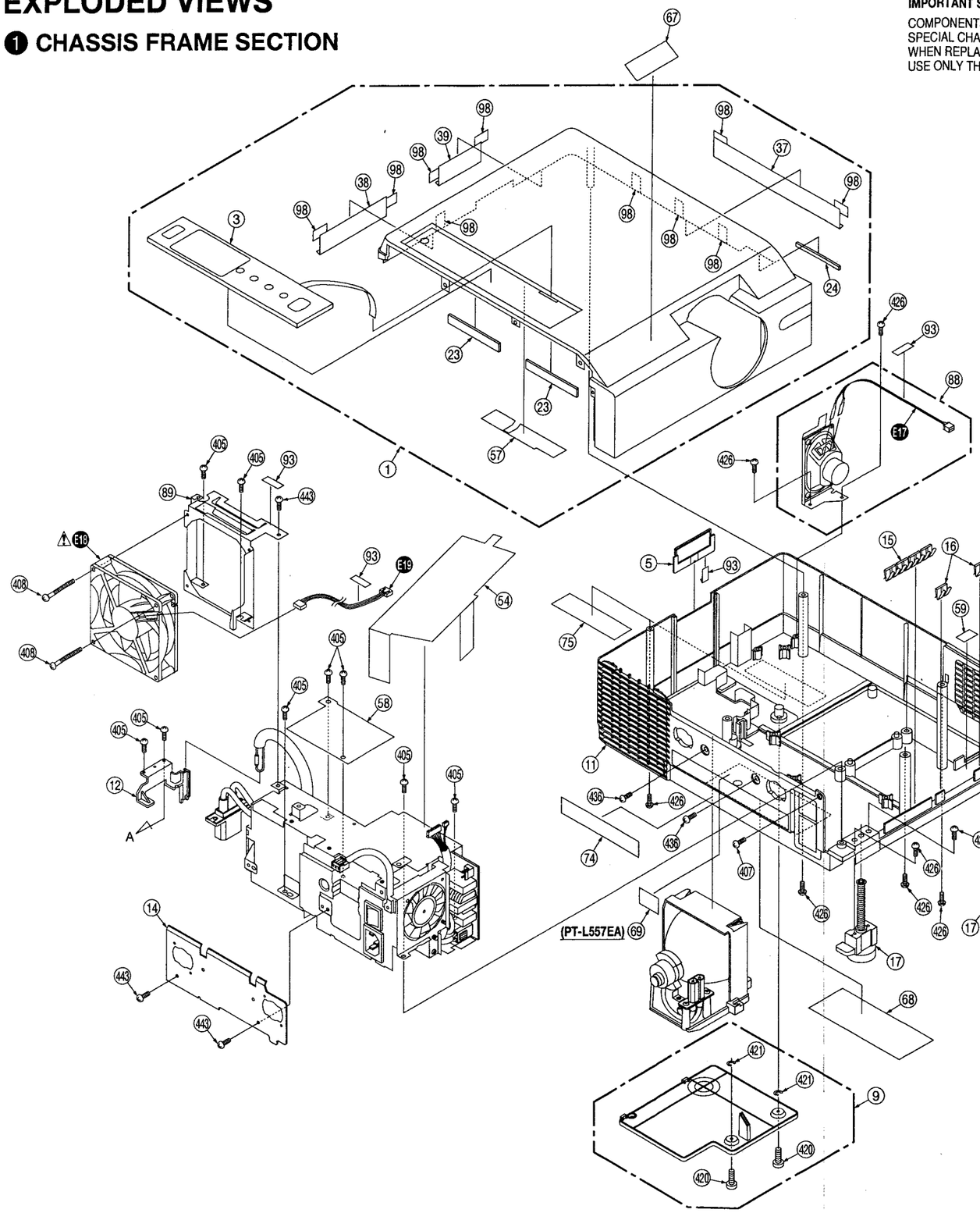
EXPLODED VIEWS

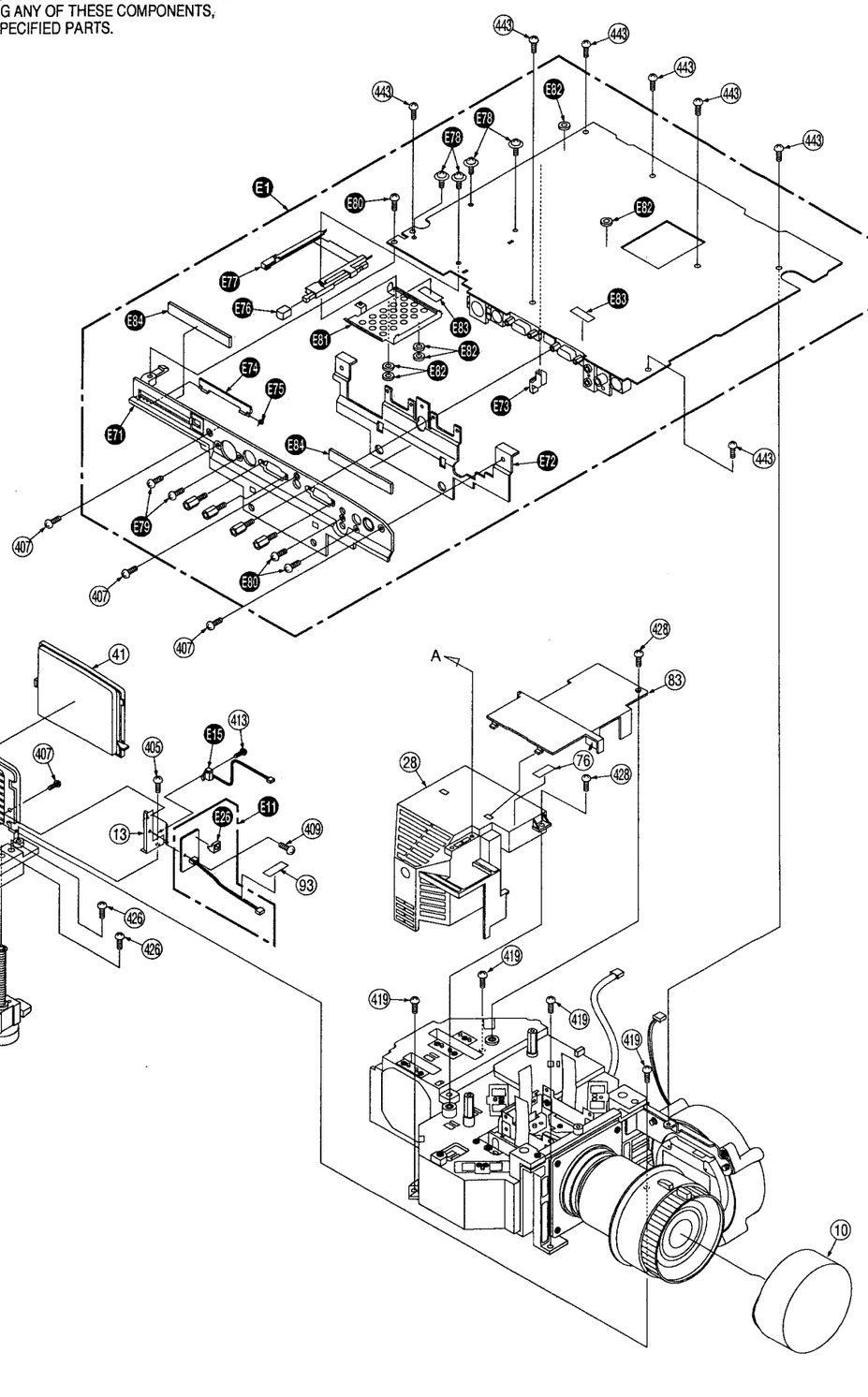
❶ CHASSIS FRAME SECTION

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

Note: Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.





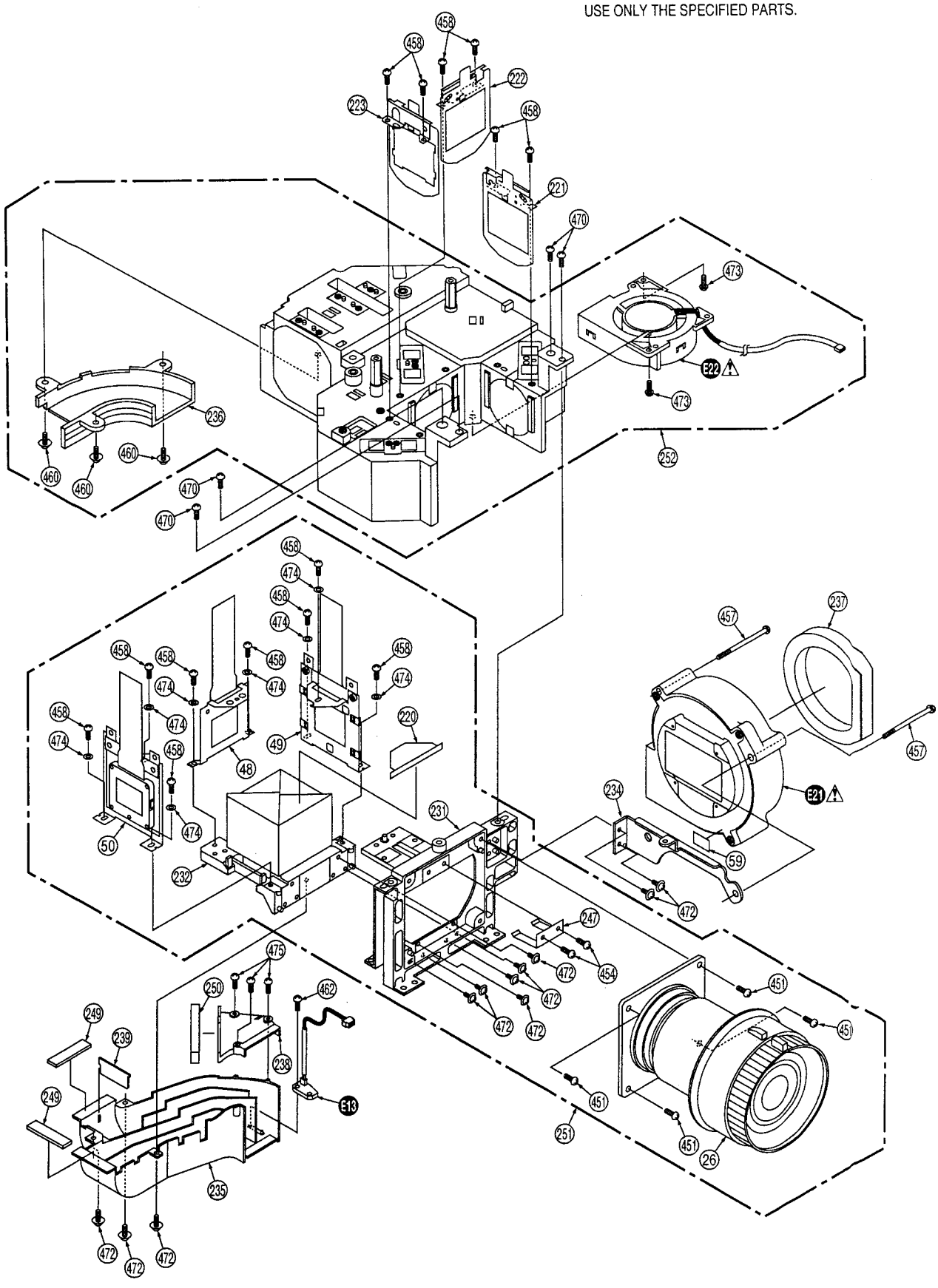
8-1

8-2

❷ OPTICAL BLOCK SECTION

IMPORTANT SAFETY NOTICE:

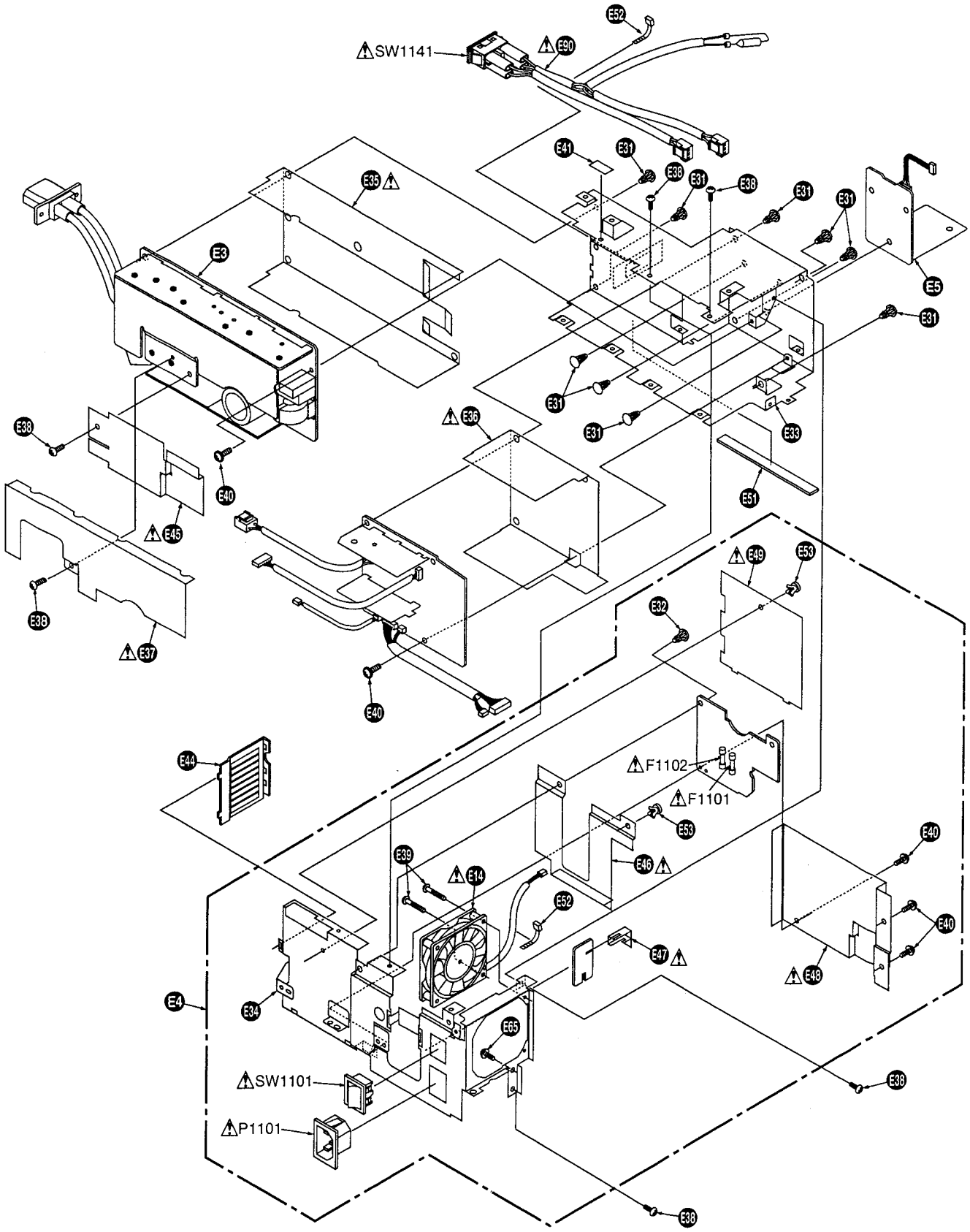
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.



❸ MAIN POWER SECTION

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

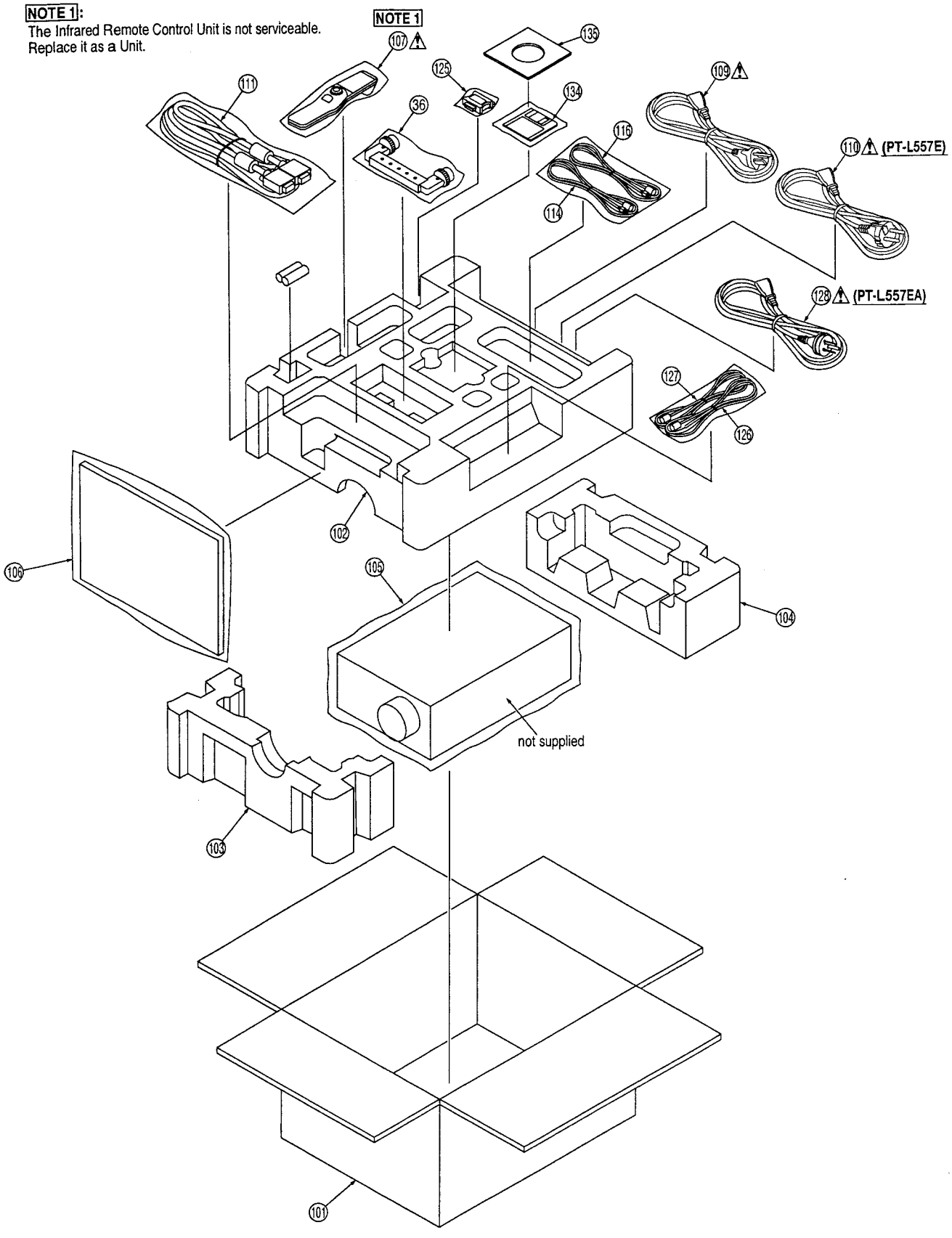


❹ PACKING PARTS AND ACCESSORIES SECTION

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE 1:
The Infrared Remote Control Unit is not serviceable. Replace it as a Unit.



REPLACEMENT PARTS LISTS

BEFORE REPLACING PARTS, READ THE FOLLOWING:

REPLACEMENT NOTES

General Notes

1. Use only original replacement parts:
   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list.
2. **IMPORTANT SAFETY NOTICE**
   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components, use only the specified parts.
3. SPECIAL NOTE
   All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.
4. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
5. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.
6. The parts which "MKA" is indicated in Remarks column will be supplied from MKA factory.

Mechanical Replacement Notes

1. Section No. of parts shown in Exploded Views are indicated in the Remarks column.
2. Abbreviation
   RTL: Retention Time Limited
   This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
3. When replacing the Liquid Crystal Display Unit, make sure to refer to "Disassembly of Optical Unit" section.
4. Infrared Remote Control Unit replacement note:
   The Infrared Remote Control Unit is not serviceable. Replace it as a Unit.

Electrical Replacement Notes

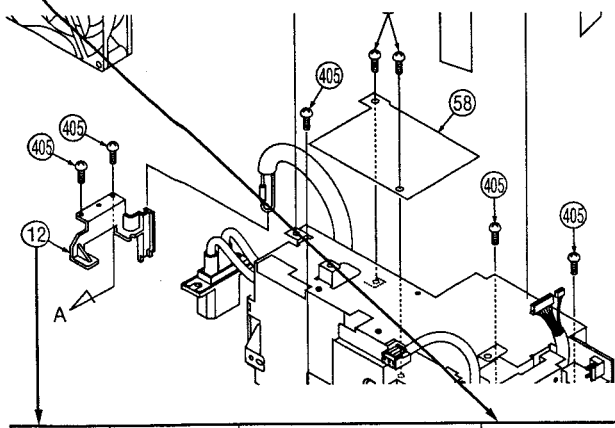
1. Item numbers with capital letter E (Example: E1, E2,...) in the Ref. No. column are shown in the exploded views. The E item numbers are also printed on the same page at the top of the column.
2. The parts with "■" mark are supplied individually or as a unit. The parts with "▲" mark are supplied individually or as a unit, and are included in "■" parts listed directly above in the parts list. The parts with "□" mark are supplied as a unit. (individual parts are not supplied.)
3. Unless otherwise specified;
   All resistors are in ohms, 1/4W, +/-5%, carbon,
   K = 1,000 ohm, M = 1,000 kohm.
   All capacitors are in microfarads, P = micromicrofarad, +/-10%.
   All coils are in microhenries, M = 1,000 microhenry, +/-10%.
4. Abbreviation
   RTL: Retention Time Limited
   This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
   NR: Non Repairable Board Ass'y
   MGF CHIP: Metal Glaze Film Chip
   C CHIP: Ceramic Chip
   COMPLX CMP: Complex Component
   W FLMPRF: Wirewound Flameproof
   C.B.A.: Circuit Board Assembly
   P.C.B.: Printed Circuit Board
   E.S.D.: Electrostatically Sensitive Devices
5. SERVICE OF CHIP PARTS
   When servicing chip parts, please use a soldering iron of less than 30 watts. Refer to "IC, TRANSISTOR AND CHIP PART INFORMATION" page.
6. The parts with "●" are 0 ohm resistor. When replacing, a wire can be substituted for a 0 ohm resistor.
7. Replacement note:
   Following C.B.A.s are supplied as a Unit(C.B.A.) only. Please note that individual parts on C.B.A. are **NOT** supplied.
   - E3 Main Power C.B.A.
   - E5 Fan Drive C.B.A.
   - E7 System Power C.B.A.

MECHANICAL REPLACEMENT PARTS LIST

<The complete Exploded Views are shown in this manual.>

EXPLODED VIEWS

❶ CHASSIS FRAME SECTION



Ref. No.	Part No.	Part Name	Remarks
		MECHANISM PARTS ON CHASSIS	
			(Section No.)
1	LSYF0328	TOP COVER ASS'Y	1
3	LSEK0348	OPERATION PANEL UNIT	1
5	LSGP0160	REAR INFRARED PIECE	1
9	LSYF0320	LAMP COVER UNIT	1
10	LSYF0323	LENS CAP UNIT	1
11	LSMP0197	BOTTOM CASE, PLASTIC	1
12	LSMP0194	CONNECTOR STAY	1
13	LSMA0329	FRONT INFRARED PLATE, STEEL	1
14	LSYF0321	HANDLE PLATE UNIT	1
15	LSMC0078	FINGER CLIP	1
16	LSMC0079	FINGER CLIP	1
17	LSYF0322	FOOT UNIT	1
23	LSMT0043	CUSHION, POLYURETHANE+NYLON	1
24	LSMT0044	CUSHION, POLYURETHANE+NYLON	1
26	LSDL0054	PROJECTION LENS	2
28	LSMP0192	LAMP HOUSE	1
36	LSYH0015	HANDLE UNIT	4
37	LSSC0260	SHIELD TAPE	1
38	LSSC0259	SHIELD TAPE	1
39	LSSC0258	SHIELD TAPE	1
41	LSYF0324	FILTER COVER UNIT	1
48	LSXA0253	LIQUID CRYSTAL DISPLAY GREEN	2 **NOTE 1**
	LSXA0256	UNIT	**NOTE 1**
49	LSXA0255	LIQUID CRYSTAL DISPLAY RED	2 **NOTE 1**
	LSXA0252	UNIT	**NOTE 1**
50	LSXA0257	LIQUID CRYSTAL DISPLAY BLUE	2 **NOTE 1**
	LSXA0254	UNIT	**NOTE 1**
54	LSMZ0232	WATER BARRIER	1
57	LSMZ0224	TOP BARRIER	1
58	LSMZ0230	SWITCH BARRIER	1
59	LSMZ0170	BARRIER	1,2
67	LSQL0757	CAUTION LABEL TOP	1 PT-L557E
67	LSQL0758	CAUTION LABEL TOP	1 PT-L557EA
68	LSQL0748	CAUTION LABEL BOTTOM-A	1 PT-L557E
68	LSQL0749	CAUTION LABEL BOTTOM-A	1 PT-L557EA
69	LSQL0764	CAUTION LABEL BOTTOM-B	1 PT-L557EA
74	LSQL0763	CAUTION LABEL BOTTOM-C	1 PT-L557E
74	LSQL0752	CAUTION LABEL BOTTOM-C	1 PT-L557EA
75	LSQL0754	CAUTION LABEL BOTTOM-D	1 PT-L557E
75	LSQL0755	CAUTION LABEL BOTTOM-D	1 PT-L557EA
76	LSQL0781	FUSE LABEL	1
83	LSMP0193	LAMP AIR DUCT	1
88	LSYF0319	SPEAKER UNIT	1
89	LSMA0335	FAN PLATE, STEEL	1
93	VMFS0129	SHEET, NYLON+RAYON	1
98	VMFS0321	SHEET, NYLON+RAYON	1

Ref. No.	Part No.	Part Name	Remarks
101	LSPG0653	PACKING CASE, PAPER	4 PT-L557E
101	LSPG0655	PACKING CASE, PAPER	4 PT-L557EA
102	LSPN0113	TOP CUSHION, STYROFOAM	4
103	LSPN0114	BOTTOM CUSHION FRONT, STYROFOAM	4
104	LSPN0115	BOTTOM CUSHION REAR, STYROFOAM	4
105	VPFS0131	BAG, POLYETHYLENE	4
106	LSQF0138	FAN BAG	4 PT-L557E
106	LSQF0140	FAN BAG	4 PT-L557EA
107	LRQ90035	INFRARED REMOTE CONTROL UNIT	⚠ 4 PT-L557E **NOTE 2**
107	LRQ90036	INFRARED REMOTE CONTROL UNIT	⚠ 4 PT-L557EA **NOTE 2**
109	VJAS0188	POWER CORD W/PLUG, 250V	⚠ 4
110	VJAS0189	POWER CORD W/PLUG, 250V	⚠ 4 PT-L557E
111	LSJA0239	VGA CABLE W/PLUG, DC 5V	4
114	LSJA0074	VIDEO CABLE W/PLUG	4
116	LSJA0240	AUDIO CABLE W/PLUG, 0.9VPP	4
125	LSJA0158	VGA MAC ADAPTOR	4
126	LSJA0212	PS/2 MOUSE CABLE W/PLUG, 5V	4
127	LSJA0214	VGA MOUSE CABLE W/PLUG, 5V	4
128	VJAS0210	POWER CORD W/PLUG, 250V	⚠ 4 PT-L557EA
134	LSFT0166	JPEG VIEWER FD FOR WINDOWS	4
		95/98	
135	LSPG0670	FLOPPY DISK PAD	4
220	LSMA0340	BLIND PLATE	2
221	LSXA0258	POLARIZER RED UNIT	2
222	LSXA0259	POLARIZER GREEN UNIT	2
223	LSXA0260	POLARIZER BLUE UNIT	2
231	LSMK0017	OPTICAL BLOCK	2
232	LSDL0056	DICHROIC PRISM UNIT	2
234	LSMA0328	FAN PLATE, STEEL	2
235	LSMP0184	DUCT	2
236	LSMP0196	LAMP AIR DUCT	2
237	LSMF0025	SIDE FILTER	2
238	LSMP0185	DUCT COVER	2
239	LSMP0186	DUCT PIECE	2
247	LSMC0074	PRISM SPRING	2
249	LSMF0027	DUCT FILTER 1	2
250	LSMF0028	DUCT FILTER 2	2
251	LSXA0267	OPTICAL BASE UNIT	2
252	LSXA0269	OPTICAL BLOCK UNIT	2
		SCREWS AND WASHERS	
405	XTV3+8GFR	TAPPING SCREW, STEEL	1
407	XTB3+7FFZ	TAPPING SCREW, STEEL	1
408	XTV3+30J	TAPPING SCREW, STEEL	1
409	XTN3+4F	TAPPING SCREW, STEEL	1
413	XTB2+6FFR	TAPPING SCREW, STEEL	1
419	XTB4+15AFR	TAPPING SCREW, STEEL	1
420	LSHD0030	SCREW, STEEL	1
421	XUC3FP	E-RING, STEEL	1
426	XTN3+12GFR	TAPPING SCREW, STEEL	1
428	XSB3+6FR	SCREW, STEEL	1
436	XTB4+8FFZ	TAPPING SCREW, STEEL	1
443	XTW3+6MR	TAPPING SCREW, STEEL	1
451	XSN4+10FZ	SCREW, STEEL	2
454	XSN3+6FZ	SCREW, STEEL	2
457	XSB4+35	SCREW, STEEL	2
458	XSN3+4FR	SCREW, STEEL	2
460	XYN3+F6FZ	SCREW W/WASHER, STEEL	2
462	XTN2+4GFR	TAPPING SCREW, STEEL	2
470	XSN4+8FZ	SCREW, STEEL	2
472	XYN3+K6FZ	SCREW W/WASHER, STEEL	2
473	XSN3+8FZ	SCREW, STEEL	2
474	XWE3D7	WASHER, STEEL	2
475	XTN2+8GFZ	TAPPING SCREW, STEEL	2
		SERVICE FIXTURES AND TOOLS	
	LSUA0010	EXTENSION CABLE	

NOTE 1: When replacing the Liquid Crystal Display Unit, make sure to refer to "Disassembly of Optical Unit" section.

NOTE 2: The Infrared Remote Control Unit is not serviceable. Replace it as a Unit.

ELECTRICAL REPLACEMENT PARTS LIST

(E1, E3, E4, E5, E7, E11, E13)

Ref. No.	Part No.	Part Name	Remarks
		PRINTED CIRCUIT BOARD ASSEMBLY	
E1	LSEP3002A1	MAIN C.B.A.	■ E.S.D. RTL
E3	LSEP1007A1	MAIN POWER C.B.A. NR	□
E7	LSEP1008A1	SYSTEM POWER C.B.A. NR	□
E4	LSEB1009A1	FILTER UNIT NR	□
E5	LSEP1011A1	FAN DRIVE C.B.A. NR	□
E11	LSEP0A10A1	INFRARED SENSOR FRONT C.B.A.	■ RTL
E13	LSEP0A11A1	THERMISTOR C.B.A.	■ RTL
		MAIN C.B.A.	■
		INTEGRATED CIRCUITS	
IC1901	PQ20VZ1U	IC, LINEAR SWITCHING REGULATOR	
IC2001	UPC29M33T-E1	IC, LINEAR +3.3V REGULATOR	
IC2002	AN78L05M-E1	IC, LINEAR +5V REGULATOR	
IC2003	UPD65945-031	IC, CMOS GATE ARRAYS	E.S.D.
IC2004	TLC29331PW	IC, LINEAR VCO & PFD	
IC2005	ADS831E-1K	IC, LINEAR A/D CONVERTER	
IC2006	ADS831E-1K	IC, LINEAR A/D CONVERTER	
IC2007	ADS831E-1K	IC, LINEAR A/D CONVERTER	
IC2009	UPC29M33T-E1	IC, LINEAR +3.3V REGULATOR	
IC2010	UPC29M03T-E1	IC, LINEAR +3V REGULATOR	
IC2011	UPD82335-001	IC, CMOS GATE ARRAYS	E.S.D.
IC2012	MN47V77S	IC, 2MBIT FIFO MEMORY	E.S.D.
	OR MN47V77ST1	IC, 2MBIT FIFO MEMORY	E.S.D.
IC2013	CXD2307R	IC, LINEAR D/A CONVERTER	
IC2014	MN47V77S	IC, 2MBIT FIFO MEMORY	E.S.D.
	OR MN47V77ST1	IC, 2MBIT FIFO MEMORY	E.S.D.
IC2015	M35072-055FP	IC, LOGIC OSD	E.S.D.
IC2016	MN47V77S	IC, 2MBIT FIFO MEMORY	E.S.D.
	OR MN47V77ST1	IC, 2MBIT FIFO MEMORY	E.S.D.
IC2017	TC74VHC74FT	IC, CMOS STANDARD LOGIC D-FF	E.S.D.
	OR 74VHC74MTCX	IC, CMOS STANDARD LOGIC D-FF	E.S.D.
IC2018	MN47V77S	IC, 2MBIT FIFO MEMORY	E.S.D.
	OR MN47V77ST1	IC, 2MBIT FIFO MEMORY	E.S.D.
IC2019	MN47V77S	IC, 2MBIT FIFO MEMORY	E.S.D.
	OR MN47V77ST1	IC, 2MBIT FIFO MEMORY	E.S.D.
IC2020	MN47V77S	IC, 2MBIT FIFO MEMORY	E.S.D.
	OR MN47V77ST1	IC, 2MBIT FIFO MEMORY	E.S.D.
IC2021	TC7WH157FUTL	IC, CMOS STANDARD LOGIC	E.S.D.
		MULTIPLEXER	
IC2022	TC74LCX245FT	IC, CMOS STANDARD LOGIC	E.S.D.
		TRANSCEIVER	
	OR 74LCX245MTCX	IC, CMOS STANDARD LOGIC	E.S.D.
		TRANSCEIVER	
IC2023	TC74LCX245FT	IC, CMOS STANDARD LOGIC	E.S.D.
		TRANSCEIVER	
	OR 74LCX245MTCX	IC, CMOS STANDARD LOGIC	E.S.D.
		TRANSCEIVER	
IC2024	TC74VHCT541T	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
IC2025	TC74VHCT541T	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
IC3001	AD8055ART	IC, LINEAR BUFFER	
IC3002	AD8055ART	IC, LINEAR BUFFER	
IC3003	AD8055ART	IC, LINEAR BUFFER	
IC3004	AT24C21	IC, 2K EEP ROM DDC MEMORY	E.S.D.
IC3005	74F125SJX	IC, LOGIC BUFFER	E.S.D.
IC3006	M52348FP	IC, LINEAR INPUT SELECT	
IC3007	M52347FP	IC, LINEAR SYNC SIGNAL PROCESS	
IC3008	AN93B06SCRE1	IC, LINEAR VIDEO AMPLIFER	
IC3009	M62353GP	IC, LINEAR D/A CONVERTER	
IC3501	CD4053BCMX	IC, LINEAR	
IC3502	CD4053BCMX	IC, LINEAR	
IC3504	ET6040S0A	IC, LINEAR SAMPLING & HOLD	
IC3505	ET6040S0A	IC, LINEAR SAMPLING & HOLD	
IC3506	ET6040S0A	IC, LINEAR SAMPLING & HOLD	
IC3507	LC4105V-TLM	IC, CMOS STANDARD LOGIC LEVEL	E.S.D.
		SHIFTER	
IC3508	LC4105V-TLM	IC, CMOS STANDARD LOGIC LEVEL	E.S.D.
		SHIFTER	

Ref. No.	Part No.	Part Name	Remarks
IC3509	M62353GP	IC, LINEAR D/A CONVERTER	
IC4001	TC4W53FU	IC, CMOS STANDARD LOGIC	E.S.D.
		SWITCHING	
IC4002	TC4W53FU	IC, CMOS STANDARD LOGIC	E.S.D.
		SWITCHING	
IC4003	AN5265	IC, LINEAR AUDIO AMP	
IC4004	M62353GP	IC, LINEAR D/A CONVERTER	
IC4005	AN78L05M-E1	IC, LINEAR +5V REGULATOR	
IC5001	TC9090AFELP	IC, LINEAR COMB FILTER	
IC5002	NJM2246M	IC, LINEAR SWITCHING	
IC5003	NJM2245M	IC, LINEAR SWITCHING	
IC5004	74VHC123AMTX	IC, CMOS STANDARD LOGIC	E.S.D.
		MULTIVIBRATOR	
IC5005	TB1227BN	IC, LINEAR Y/C SIGNAL PROCESS	
IC5006	AN78L09M-E1	IC, LINEAR +9V REGURATOR	
IC6001	74VHC14MTCX	IC, CMOS STANDARD LOGIC	E.S.D.
		INVERTER	
IC6002	UPD4721GS	IC, RS232C DRIVER	E.S.D.
IC6003	TWM7000-15	IC, 4BIT MICROCONTROLLER MOUSE	E.S.D.
		INTERFACE	
IC6004	AT24C02NSCTL	IC, 2K EEP ROM	E.S.D.
IC6005	AT24C02NSCTL	IC, 2K EEP ROM	E.S.D.
IC6006	HD64F2148FS1	IC, 16MBIT MICROCONTROLLER	E.S.D.
IC6007	MN13821-RTX	IC, LOGIC RESET	E.S.D.
IC6008	74VHC14MTCX	IC, CMOS STANDARD LOGIC	E.S.D.
		INVERTER	
IC6601	TC7SH04FU	IC, LOGIC INVERTER	E.S.D.
IC6602	74VHC32MTCX	IC, CMOS STANDARD LOGIC	E.S.D.
		OR GATE	
IC6603	TC74VHCT541T	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
IC6604	TC74VHCT541T	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
IC6605	TC74VHCT541T	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
IC6606	TC74VHCT541T	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
IC6607	74LVX4245MTX	IC, CMOS STANDARD LOGIC	E.S.D.
		TRANSCEIVER	
IC6608	74LVX4245MTX	IC, CMOS STANDARD LOGIC	E.S.D.
		TRANSCEIVER	
IC6609	TC74LCX541FT	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
	OR 74LCX541MTCX	IC, CMOS STANDARD LOGIC BUFFER	E.S.D.
IC6610	HM5165160ATT	IC, 64MBIT D RAM	E.S.D.
IC6611	74VHC157MTCX	IC, CMOS STANDARD LOGIC	E.S.D.
		MULTIPLEXER	
IC6612	74VHC157MTCX	IC, CMOS STANDARD LOGIC	E.S.D.
		MULTIPLEXER	
IC6613	MB3793-30	IC, CMOS STANDARD LOGIC RESET	E.S.D.
IC6614	UPC29M33T-E1	IC, LINEAR +3.3V REGULATOR	
IC6615	74VHC32MTCX	IC, CMOS STANDARD LOGIC	E.S.D.
		OR GATE	
IC6616	MBM29LV800S1	IC, 8MBIT FLASH MEMORY	E.S.D.
IC6617	MB91101	IC, 32BIT RISC MICROCONTROLLER	E.S.D.
IC6618	TC7WH08FUTEL	IC, CMOS STANDARD LOGIC	E.S.D.
		AND GATE	
IC6619	MBM29LV200T	IC, 2MBIT FLASH MEMORY	E.S.D.
		TRANSISTORS	
Q1901	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q1902	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q1903	2SK2839TE16L	FET CHIP	
Q1904	2SK2839TE16L	FET CHIP	
Q1905	2SK2839TE16L	FET CHIP	
Q1906	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q2007	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q2008	DTA144EU	CHIP	
	OR MUN5113T1	CHIP	
	OR UN5113	CHIP	
Q2009	2SB1073(Q,R)	CHIP	
Q2010	2SB1218A(R)	CHIP	
Q2011	2SB1218A(R)	CHIP	
Q2012	2SB1218A(R)	CHIP	
Q3001	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q3002	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	

Ref. No.	Part No.	Part Name	Remarks
Q3003	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q3004	2SC521600L	CHIP	
Q3005	2SC521600L	CHIP	
Q3006	2SC521600L	CHIP	
Q3007	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q3008	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q3009	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q3010	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q3011	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q3501	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3502	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q3503	2SD1819(S)	CHIP	
	OR 2SD1819A(S)	CHIP	
Q3504	2SC521600L	CHIP	
Q3505	2SC521600L	CHIP	
Q3506	2SB709A(R)	CHIP	
Q3507	2SB1218A(R)	CHIP	
Q3508	2SC2412K1	CHIP	
	OR 2SD601(R,S)	CHIP	
Q3509	2SD1819A(R)	CHIP	
Q3510	2SA1037K146R	CHIP	
	OR 2SB709A(R,S)	CHIP	
Q3511	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q3512	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3513	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3514	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q3515	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3516	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q3518	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q3519	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3520	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q3521	2SD1819(S)	CHIP	
	OR 2SD1819A(S)	CHIP	
Q3522	2SC521600L	CHIP	
Q3523	2SC521600L	CHIP	
Q3524	2SB709A(R)	CHIP	
Q3525	2SB1218A(R)	CHIP	
Q3526	2SC2412K1	CHIP	
	OR 2SD601(R,S)	CHIP	
Q3527	2SD1819A(R)	CHIP	
Q3528	2SA1037K146R	CHIP	
	OR 2SB709A(R,S)	CHIP	
Q3529	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q3530	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3531	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3532	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q3533	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3534	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q3535	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3536	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q3537	2SD1819(S)	CHIP	
	OR 2SD1819A(S)	CHIP	
Q3538	2SC521600L	CHIP	

Ref. No.	Part No.	Part Name	Remarks
Q3539	2SC521600L	CHIP	
Q3540	2SB709A(R)	CHIP	
Q3541	2SB1218A(R)	CHIP	
Q3542	2SC2412K1	CHIP	
	OR 2SD601(R,S)	CHIP	
Q3543	2SD1819A(R)	CHIP	
Q3544	2SA1037K146R	CHIP	
	OR 2SB709A(R,S)	CHIP	
Q3545	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q3546	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3547	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3548	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q3549	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q3550	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q4001	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q4002	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q4003	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q4004	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q4005	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q4006	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q4007	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q4008	2SC4081T106R	CHIP	
	OR 2SD1819A(R,S)	CHIP	
Q4009	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q4010	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q4011	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q4012	UN5215(R)	CHIP	
Q4013	UN5215(R)	CHIP	
Q4014	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q4015	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q4016	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q4017	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q4018	2SD1119(R)	CHIP	
Q4019	2SB1219A(R)	CHIP	
Q4020	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q5001	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q5002	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q5003	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q5004	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q5005	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q5006	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q5007	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q5008	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q5009	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q5010	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q5011	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	

Ref. No.	Part No.	Part Name	Remarks
Q5012	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q5014	2SA1576A106R	CHIP	
	OR 2SB1218ARS	CHIP	
Q5015	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q5016	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q5017	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q5018	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q5019	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q5020	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q6003	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q6004	2SC4081T106R	CHIP	
	OR 2SD1819A	CHIP	
Q6005	DTC144EU	CHIP	
	OR MUN5213	CHIP	
	OR UN5213	CHIP	
Q6006	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q6007	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q6008	DTA144EU	CHIP	
	OR MUN5113T1	CHIP	
	OR UN5113	CHIP	
Q6009	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q6010	DTA144EU	CHIP	
	OR MUN5113T1	CHIP	
	OR UN5113	CHIP	
Q6011	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q6012	DTA144EU	CHIP	
	OR MUN5113T1	CHIP	
	OR UN5113	CHIP	
Q6013	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q6014	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q6015	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q6016	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q6017	2SA1576A106R	CHIP	
	OR 2SB1218A	CHIP	
Q6601	DTA124EU	CHIP	
	OR MUN5112T1	CHIP	
	OR UN5112	CHIP	
Q6602	UN521F	CHIP	
Q6603	2SD1119(Q)	CHIP	
		DIODES	
D2001	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D2002	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D3001	RD6.2S	ZENER CHIP 6.2V	
D3002	RD6.2S	ZENER CHIP 6.2V	
D3003	RD6.2S	ZENER CHIP 6.2V	
D3004	RD6.2S	ZENER CHIP 6.2V	
D3005	RD6.2S	ZENER CHIP 6.2V	
D3006	RD6.2S	ZENER CHIP 6.2V	
D3501	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D3502	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D3503	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	

Ref. No.	Part No.	Part Name	Remarks
D3504	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D3505	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D3506	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D3507	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D3508	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D3509	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D3510	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D4001	RD6.2S	ZENER CHIP 6.2V	
D4002	RD6.2S	ZENER CHIP 6.2V	
D4003	RD6.2S	ZENER CHIP 6.2V	
D4004	RD6.2S	ZENER CHIP 6.2V	
D4005	RD6.2S	ZENER CHIP 6.2V	
D4006	RD6.2S	ZENER CHIP 6.2V	
D4007	RD6.2S	ZENER CHIP 6.2V	
D4008	RD6.2S	ZENER CHIP 6.2V	
D4009	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D4010	MA8120-M	ZENER CHIP 12V	
D4012	DAN202UT	CHIP	
	OR MA141WK	CHIP	
	OR MA142WK	CHIP	
D4013	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D4014	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D4015	SFPM-52V		
D4016	SFPM-52V		
D4017	RD6.2S	ZENER CHIP 6.2V	
D4018	RD6.2S	ZENER CHIP 6.2V	
D4019	RD6.2S	ZENER CHIP 6.2V	
D4020	RD6.2S	ZENER CHIP 6.2V	
D5001	RD6.2S	ZENER CHIP 6.2V	
D5006	RD6.2S	ZENER CHIP 6.2V	
D5007	RD6.2S	ZENER CHIP 6.2V	
D5008	RD6.2S	ZENER CHIP 6.2V	
D5009	RD6.2S	ZENER CHIP 6.2V	
D5010	RD6.2S	ZENER CHIP 6.2V	
D5011	RD6.2S	ZENER CHIP 6.2V	
D5012	DAP202UT	CHIP	
	OR MA141WA	CHIP	
	OR MA142WA	CHIP	
	OR M1MA142WA	CHIP	
D5013	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D6001	RD13S	ZENER CHIP 13V	
D6002	RD13S	ZENER CHIP 13V	
D6003	RD6.2S	ZENER CHIP 6.2V	
D6004	RD6.2S	ZENER CHIP 6.2V	
D6005	RD13S	ZENER CHIP 13V	
D6006	RD13S	ZENER CHIP 13V	
D6007	RD6.2S	ZENER CHIP 6.2V	
D6008	RD6.2S	ZENER CHIP 6.2V	
D6009	RD6.2S	ZENER CHIP 6.2V	
D6010	RD6.2S	ZENER CHIP 6.2V	
D6011	RD13S	ZENER CHIP 13V	
D6012	RD13S	ZENER CHIP 13V	
D6013	RD6.2S	ZENER CHIP 6.2V	
D6014	RD6.2S	ZENER CHIP 6.2V	
D6015	RD6.2S	ZENER CHIP 6.2V	
D6016	RD13S	ZENER CHIP 13V	

Ref. No.	Part No.	Part Name	Remarks
D6017	RD13S	ZENER CHIP 13V	
D6018	DAN202UT	CHIP	
	OR MA141WK	CHIP	
	OR MA142WK	CHIP	
D6019	DAN202UT	CHIP	
	OR MA141WK	CHIP	
	OR MA142WK	CHIP	
D6021	RD6.2S	ZENER CHIP 6.2V	
D6022	RD6.2S	ZENER CHIP 6.2V	
D6033	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D6034	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D6035	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D6036	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D6601	MA8068-M	ZENER CHIP 6.8V	
D6602	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
D6603	MA110	CHIP	
	OR MA111	CHIP	
	OR 1SS355TE-17	CHIP	
		RESISTORS	
R1901	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R1902	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R1903	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R1904	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R1905	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R1906	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R1908	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R1909	ERJ8GEYJ222V	MGF CHIP 1/8W 2.2K	
R1910	ERJ8GEYJ222V	MGF CHIP 1/8W 2.2K	
R1911	ERJ8GEYJ222V	MGF CHIP 1/8W 2.2K	
R1912	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R1913	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R1914	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R1915	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R1916	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R1917	ERA3YED123V	MGF CHIP ±0.5% 1/16W 12K	
R1918	ERA3YED102V	MGF CHIP ±0.5% 1/16W 1K	
R2002	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2003	MNR14EABJ220	ARRAY CHIP 22	
R2004	MNR14EABJ220	ARRAY CHIP 22	
R2005	MNR14EABJ220	ARRAY CHIP 22	
R2006	MNR14EABJ220	ARRAY CHIP 22	
R2013	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R2014	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R2015	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2017	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2025	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2026	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R2030	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2032	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R2033	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R2034	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R2035	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R2036	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R2040	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2041	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2042	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2043	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2044	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2051	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2052	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2053	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R2054	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2055	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2056	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2057	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2058	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●

Ref. No.	Part No.	Part Name	Remarks
R2059	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2060	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2061	MNR14EABJ220	ARRAY CHIP 22	
R2062	MNR14EABJ220	ARRAY CHIP 22	
R2063	MNR14EABJ220	ARRAY CHIP 22	
R2064	MNR14EABJ220	ARRAY CHIP 22	
R2065	MNR14EABJ220	ARRAY CHIP 22	
R2066	MNR14EABJ220	ARRAY CHIP 22	
R2067	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2068	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R2069	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R2070	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2071	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2072	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R2074	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2076	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2077	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2083	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R2084	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R2085	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R2086	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R2090	ERJ12YJ2R2H	MGF CHIP 1/2W 2.2	
R2091	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R2092	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R2093	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R2094	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R2095	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2096	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R2097	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R2098	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R2099	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R2100	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R2101	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R2102	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2103	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2104	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2105	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R2106	ERJ3GEYJ121V	MGF CHIP 1/16W 120	
R2107	MNR14EABJ220	ARRAY CHIP 22	
R2108	MNR14EABJ220	ARRAY CHIP 22	
R2109	MNR14EABJ220	ARRAY CHIP 22	
R2110	MNR14EABJ220	ARRAY CHIP 22	
R2111	MNR14EABJ220	ARRAY CHIP 22	
R2112	MNR14EABJ220	ARRAY CHIP 22	
R2113	ERJ3GEYJ121V	MGF CHIP 1/16W 120	
R2114	ERJ3GEYJ121V	MGF CHIP 1/16W 120	
R2115	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R2116	MNR14EABJ220	ARRAY CHIP 22	
R2117	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R2118	MNR14EABJ220	ARRAY CHIP 22	
R2119	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R2120	MNR14EABJ220	ARRAY CHIP 22	
R2121	MNR14EABJ220	ARRAY CHIP 22	
R2122	MNR14EABJ220	ARRAY CHIP 22	
R2123	MNR14EABJ473	ARRAY CHIP 47K	
R2124	MNR14EABJ473	ARRAY CHIP 47K	
R2125	MNR14EABJ473	ARRAY CHIP 47K	
R2126	MNR14EABJ473	ARRAY CHIP 47K	
R2127	MNR14EABJ220	ARRAY CHIP 22	
R2128	MNR14EABJ220	ARRAY CHIP 22	
R2131	MNR14EABJ220	ARRAY CHIP 22	
R2132	MNR14EABJ220	ARRAY CHIP 22	
R2133	MNR14EABJ220	ARRAY CHIP 22	
R2134	MNR14EABJ220	ARRAY CHIP 22	
R2135	MNR14EABJ220	ARRAY CHIP 22	
R2138	MNR14EABJ101	ARRAY CHIP 100	
R2139	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2140	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2141	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2142	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2143	MNR14EABJ220	ARRAY CHIP 22	
R2144	MNR14EABJ220	ARRAY CHIP 22	
R2145	MNR14EABJ220	ARRAY CHIP 22	
R2146	MNR14EABJ220	ARRAY CHIP 22	
R2147	MNR14EABJ220	ARRAY CHIP 22	
R2148	MNR14EABJ220	ARRAY CHIP 22	
R2149	MNR14EABJ220	ARRAY CHIP 22	
R2150	MNR14EABJ220	ARRAY CHIP 22	

Ref. No.	Part No.	Part Name	Remarks
R2151	MNR14EABJ220	ARRAY CHIP 22	
R2152	MNR14EABJ220	ARRAY CHIP 22	
R2153	MNR14EABJ220	ARRAY CHIP 22	
R2154	MNR14EABJ220	ARRAY CHIP 22	
R2155	MNR14EABJ220	ARRAY CHIP 22	
R2156	MNR14EABJ220	ARRAY CHIP 22	
R2157	MNR14EABJ220	ARRAY CHIP 22	
R2158	MNR14EABJ220	ARRAY CHIP 22	
R2159	MNR14EABJ220	ARRAY CHIP 22	
R2160	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2161	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R2162	MNR14EABJ220	ARRAY CHIP 22	
R2163	MNR14EABJ220	ARRAY CHIP 22	
R2164	MNR14EABJ220	ARRAY CHIP 22	
R2165	MNR14EABJ220	ARRAY CHIP 22	
R2166	MNR14EABJ220	ARRAY CHIP 22	
R2167	MNR14EABJ220	ARRAY CHIP 22	
R2168	MNR14EABJ220	ARRAY CHIP 22	
R2169	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2170	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2172	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R2174	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2175	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2176	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R2177	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R2179	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R3001	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R3002	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R3003	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R3004	ERA3YHD750V	MGF CHIP +-0.5% 1/16W 75	
R3005	ERA3YHD750V	MGF CHIP +-0.5% 1/16W 75	
R3006	ERA3YHD750V	MGF CHIP +-0.5% 1/16W 75	
R3007	ERA3YHD750V	MGF CHIP +-0.5% 1/16W 75	
R3008	ERA3YHD750V	MGF CHIP +-0.5% 1/16W 75	
R3009	ERA3YHD750V	MGF CHIP +-0.5% 1/16W 75	
R3010	ERA3YED391V	MGF CHIP +-0.5% 1/16W 390	
R3011	ERA3YED242V	MGF CHIP +-0.5% 1/16W 2.4K	
R3012	ERA3YED152V	MGF CHIP +-0.5% 1/16W 1.5K	
R3013	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R3014	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R3015	ERA3YED242V	MGF CHIP +-0.5% 1/16W 2.4K	
R3016	ERA3YED152V	MGF CHIP +-0.5% 1/16W 1.5K	
R3017	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R3018	ERA3YED242V	MGF CHIP +-0.5% 1/16W 2.4K	
R3019	ERA3YED152V	MGF CHIP +-0.5% 1/16W 1.5K	
R3020	ERA3YED222V	MGF CHIP +-0.5% 1/16W 2.2K	
R3021	ERA3YED391V	MGF CHIP +-0.5% 1/16W 390	
R3022	ERA3YED222V	MGF CHIP +-0.5% 1/16W 2.2K	
R3023	ERA3YED391V	MGF CHIP +-0.5% 1/16W 390	
R3024	ERA3YED391V	MGF CHIP +-0.5% 1/16W 390	
R3025	ERA3YED391V	MGF CHIP +-0.5% 1/16W 390	
R3026	ERA3YED391V	MGF CHIP +-0.5% 1/16W 390	
R3027	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R3028	ERA3YED222V	MGF CHIP +-0.5% 1/16W 2.2K	
R3029	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R3030	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R3031	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3032	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3033	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3034	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3035	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3036	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3037	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3038	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3039	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3040	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3041	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R3042	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3043	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R3044	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3045	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3046	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3047	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3048	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R3049	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R3050	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R3051	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R3052	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	

Ref. No.	Part No.	Part Name	Remarks
R3053	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R3054	ERJ3GEYJ390V	MGF CHIP 1/16W 39	
R3055	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3056	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R3057	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R3058	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R3059	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3060	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R3061	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3062	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3063	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R3066	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R3067	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R3068	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3069	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3070	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R3071	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R3072	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3073	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R3074	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R3075	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R3076	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3077	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
R3078	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
R3079	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
R3080	ERJ3GEYJ390V	MGF CHIP 1/16W 39	
R3081	ERJ3GEYJ390V	MGF CHIP 1/16W 39	
R3082	ERJ3GEYJ390V	MGF CHIP 1/16W 39	
R3083	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R3084	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3085	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R3086	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R3087	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R3088	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3089	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3090	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3091	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3092	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3093	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3094	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R3095	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R3096	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R3097	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R3098	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R3099	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R3100	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R3101	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3102	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R3103	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3104	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R3105	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R3106	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R3107	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R3108	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3109	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3501	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3502	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3503	ERJ3GEYJ121V	MGF CHIP 1/16W 120	
R3504	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3505	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R3506	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R3507	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R3508	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3509	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3510	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3511	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R3512	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R3513	ERJ6ENF6800V	MGF CHIP +-1% 1/10W 680	
R3514	ERJ6ENF6800V	MGF CHIP +-1% 1/10W 680	
R3515	ERJ6ENF6800V	MGF CHIP +-1% 1/10W 680	
R3516	ERJ6ENF8200V	MGF CHIP +-1% 1/10W 820	
R3517	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R3518	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
R3519	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R3520	ERJ6GEYJ821V	MGF CHIP 1/10W 820	
R3521	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R3522	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R3523	ERJ3GEYJ100V	MGF CHIP 1/16W 10	

Ref. No.	Part No.	Part Name	Remarks
R3524	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R3525	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R3526	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R3530	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R3531	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3532	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R3533	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3534	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3535	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3536	ERJ3GEYJ121V	MGF CHIP 1/16W 120	
R3537	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3538	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R3539	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R3540	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R3541	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3542	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3543	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3544	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R3545	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R3546	ERJ6ENF6800V	MGF CHIP +-1% 1/10W 680	
R3547	ERJ6ENF6800V	MGF CHIP +-1% 1/10W 680	
R3548	ERJ6ENF6800V	MGF CHIP +-1% 1/10W 680	
R3549	ERJ6ENF8200V	MGF CHIP +-1% 1/10W 820	
R3550	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R3551	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
R3552	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R3553	ERJ6GEYJ821V	MGF CHIP 1/10W 820	
R3554	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R3555	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R3556	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R3557	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R3558	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R3559	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R3560	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3561	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3562	ERJ3GEYJ121V	MGF CHIP 1/16W 120	
R3563	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3564	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R3565	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R3566	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R3567	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3568	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3569	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3570	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R3571	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R3572	ERJ6ENF6800V	MGF CHIP +-1% 1/10W 680	
R3573	ERJ6ENF6800V	MGF CHIP +-1% 1/10W 680	
R3574	ERJ6ENF6800V	MGF CHIP +-1% 1/10W 680	
R3575	ERJ6ENF8200V	MGF CHIP +-1% 1/10W 820	
R3576	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R3577	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
R3578	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R3579	ERJ6GEYJ821V	MGF CHIP 1/10W 820	
R3580	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R3581	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R3582	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R3583	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R3584	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R3585	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R3586	ERA3YED123V	MGF CHIP +-0.5% 1/16W 12K	
R3587	ERA3YED152V	MGF CHIP +-0.5% 1/16W 1.5K	
R3588	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R3589	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3590	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3591	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R3592	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3593	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3594	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3595	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3596	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3597	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3598	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3599	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R3600	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3601	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3602	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R3603	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3604	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	

Ref. No.	Part No.	Part Name	Remarks
R3605	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R3606	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R3607	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3608	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3609	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3610	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3611	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3612	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3613	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3614	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R3615	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3616	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3617	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R3618	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3619	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3620	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R3621	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R3622	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3623	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3624	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3625	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3626	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3627	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3628	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3629	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R3630	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3631	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R3632	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R3633	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R3634	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3635	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R3636	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3637	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3638	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3639	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3640	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3641	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3642	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3643	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3644	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3645	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3646	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3647	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3648	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3649	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3650	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3651	ERJ3GEYJ220V	MGF CHIP 1/16W 22	
R3652	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R3653	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R3654	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3655	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R3656	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R3657	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R3658	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3659	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R3660	ERJ3GEYJ154V	MGF CHIP 1/16W 150K	
R3661	ERJ3GEYJ563V	MGF CHIP 1/16W 56K	
R3662	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R3663	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R3664	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R3665	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R3666	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R3667	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R3668	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R3669	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3670	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R3671	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3672	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R3673	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R4001	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4002	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4003	ERJ3GEYJ394V	MGF CHIP 1/16W 390K	
R4004	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4005	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4006	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4007	ERJ3GEYJ394V	MGF CHIP 1/16W 390K	
R4008	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4009	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	

Ref. No.	Part No.	Part Name	Remarks
R4010	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4011	ERJ3GEYJ394V	MGF CHIP 1/16W 390K	
R4012	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4013	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4014	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4015	ERJ3GEYJ394V	MGF CHIP 1/16W 390K	
R4016	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4017	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4018	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4019	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4020	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4021	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R4022	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R4023	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4024	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4025	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4026	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R4027	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R4028	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4029	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R4030	ERJ3GEYJ272V	MGF CHIP 1/16W 2.7K	
R4032	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4033	ERJ3GEYJ224V	MGF CHIP 1/16W 220K	
R4034	ERJ14YJ221H	MGF CHIP 220	
R4035	ERJ14YJ221H	MGF CHIP 220	
R4036	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4038	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R4040	ERJ3GEYJ823V	MGF CHIP 1/16W 82K	
R4041	ERJ3GEYJ391V	MGF CHIP 1/16W 390	
R4042	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R4043	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	-
R4045	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4046	ERJ3GEYJ124V	MGF CHIP 1/16W 120K	
R4047	ERJ3GEYJ124V	MGF CHIP 1/16W 120K	
R4048	ERJ14YJ100H	MGF CHIP 10	
R4049	ERG1SG100E	METAL OXIDE +-2% 1W 10	
R4050	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4051	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4052	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R4053	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R4054	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R4055	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R4056	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R4057	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4058	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4059	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4060	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R4061	ERJ3GEYJ683V	MGF CHIP 1/16W 68K	
R4062	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R4063	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4064	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4065	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4066	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R4067	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4068	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4069	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4070	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4071	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4072	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R5001	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R5002	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R5003	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5004	ERA3YHD750V	MGF CHIP +-0.5% 1/16W 75	
R5005	ERA3YHD750V	MGF CHIP +-0.5% 1/16W 75	
R5006	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R5007	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5008	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5009	ERA3YHD750V	MGF CHIP +-0.5% 1/16W 75	
R5010	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5011	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5012	ERJ3GEYJ271V	MGF CHIP 1/16W 270	
R5013	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R5014	ERJ3GEYJ122V	MGF CHIP 1/16W 1.2K	
R5015	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R5016	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5017	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R5018	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5019	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	

Ref. No.	Part No.	Part Name	Remarks
R5020	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R5021	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5022	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5023	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R5024	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R5025	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5026	ERJ3GEYJ225V	MGF CHIP 1/16W 2.2M	
R5027	ERJ3GEYJ225V	MGF CHIP 1/16W 2.2M	
R5028	ERJ3GEYJ225V	MGF CHIP 1/16W 2.2M	
R5029	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R5030	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R5031	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5032	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5033	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5034	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5035	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R5036	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5037	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5038	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5039	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5040	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5042	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5043	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R5044	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5045	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5046	ERJ3GEYJ394V	MGF CHIP 1/16W 390K	
R5047	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R5048	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R5049	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5050	ERA3YED183V	MGF CHIP +-0.5% 1/16W 18K	
R5051	ERA3YED183V	MGF CHIP +-0.5% 1/16W 18K	
R5052	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R5053	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R5054	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R5055	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R5056	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R5057	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5058	ERJ3GEYJ224V	MGF CHIP 1/16W 220K	
R5059	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R5060	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5062	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5063	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R5065	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R5066	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R5067	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R5068	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R5069	ERJ3GEYJ474V	MGF CHIP 1/16W 470K	
R5070	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R5071	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R5072	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R5073	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R5074	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R5075	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R5077	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5078	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R5081	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R5086	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R5087	ERJ3GEY0R00V	MGF CHIP 1/16W 0	●
R6001	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6002	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6003	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6004	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6005	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6006	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6009	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6010	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6012	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6013	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6014	ERJ3GEYJ681V	MGF CHIP 1/16W 680	
R6015	MNR14EABJ101	ARRAY CHIP 100	
R6016	MNR14EABJ101	ARRAY CHIP 100	
R6017	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6018	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6019	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R6020	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6021	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R6023	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R6024	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	

Ref. No.	Part No.	Part Name				Remarks
R6025	MNR14EABJ473	ARRAY CHIP			47K	
R6026	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6027	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6028	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6029	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6030	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6031	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6032	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6033	MNR14EABJ101	ARRAY CHIP			100	
R6034	MNR14EABJ102	ARRAY CHIP			1K	
R6035	MNR14EABJ102	ARRAY CHIP			1K	
R6036	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6037	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6038	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6039	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6040	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6041	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6042	ERA3YED333V	MGF CHIP	+-0.5%	1/16W	33K	
R6043	ERA3YED333V	MGF CHIP	+-0.5%	1/16W	33K	
R6046	ERJ3GEYJ560V	MGF CHIP		1/16W	56	
R6049	ERJ3GEYJ560V	MGF CHIP		1/16W	56	
R6050	ERA3YED333V	MGF CHIP	+-0.5%	1/16W	33K	
R6051	ERA3YED333V	MGF CHIP	+-0.5%	1/16W	33K	
R6052	ERJ3GEYJ103V	MGF CHIP		1/16W	10K	
R6053	ERJ3GEYJ103V	MGF CHIP		1/16W	10K	
R6054	ERJ3GEYJ333V	MGF CHIP		1/16W	33K	
R6055	ERJ3GEYJ560V	MGF CHIP		1/16W	56	
R6056	ERJ3GEYJ560V	MGF CHIP		1/16W	56	
R6057	ERJ3GEYJ222V	MGF CHIP		1/16W	2.2K	
R6058	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6059	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6060	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6061	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6062	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6063	MNR14EABJ473	ARRAY CHIP			47K	
R6064	MNR14EABJ473	ARRAY CHIP			47K	
R6065	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6066	MNR14EABJ102	ARRAY CHIP			1K	
R6067	MNR14EABJ102	ARRAY CHIP			1K	
R6068	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6069	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6070	ERJ3GEYJ103V	MGF CHIP		1/16W	10K	
R6071	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6072	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6073	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6074	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6075	ERJ3GEYJ223V	MGF CHIP		1/16W	22K	
R6076	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6077	ERJ3GEYJ472V	MGF CHIP		1/16W	4.7K	
R6078	ERJ3GEYJ472V	MGF CHIP		1/16W	4.7K	
R6079	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6080	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6081	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6082	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6083	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6084	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6085	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6086	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6087	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6088	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6089	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6090	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6091	MNR14EABJ102	ARRAY CHIP			1K	
R6092	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6093	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6094	ERJ3GEYJ222V	MGF CHIP		1/16W	2.2K	
R6095	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6096	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6097	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6098	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6099	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6100	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6101	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6102	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6103	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6104	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6105	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6106	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	

Ref. No.	Part No.	Part Name				Remarks
R6107	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6108	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6109	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6110	MNR14EABJ102	ARRAY CHIP			1K	
R6111	MNR14EABJ101	ARRAY CHIP			100	
R6112	MNR14EABJ102	ARRAY CHIP			1K	
R6113	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6114	ERJ6GEYJ471V	MGF CHIP		1/10W	470	
R6115	ERJ3GEYJ104V	MGF CHIP		1/16W	100K	
R6116	ERJ6GEYJ471V	MGF CHIP		1/10W	470	
R6117	ERJ3GEYJ184V	MGF CHIP		1/16W	180K	
R6118	ERJ3GEYJ184V	MGF CHIP		1/16W	180K	
R6119	ERJ6GEYJ471V	MGF CHIP		1/10W	470	
R6120	ERJ6GEYJ471V	MGF CHIP		1/10W	470	
R6121	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6122	ERJ6GEYJ471V	MGF CHIP		1/10W	470	
R6123	ERJ3GEYJ103V	MGF CHIP		1/16W	10K	
R6124	ERJ6GEYJ471V	MGF CHIP		1/10W	470	
R6125	ERJ6GEYJ471V	MGF CHIP		1/10W	470	
R6126	ERJ6GEYJ271V	MGF CHIP		1/10W	270	
R6127	ERJ6GEYJ271V	MGF CHIP		1/10W	270	
R6128	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6129	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6130	ERJ3GEYJ220V	MGF CHIP		1/16W	22	
R6131	ERJ3GEYJ220V	MGF CHIP		1/16W	22	
R6132	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6134	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6135	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6136	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6137	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6138	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6139	ERJ3GEYJ101V	MGF CHIP		1/16W	100	
R6140	ERJ3GEY0R00V	MGF CHIP		1/16W	0	●
R6141	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6142	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6143	ERJ3GEYJ333V	MGF CHIP		1/16W	33K	
R6144	ERJ3GEYJ103V	MGF CHIP		1/16W	10K	
R6145	ERJ3GEYJ103V	MGF CHIP		1/16W	10K	
R6605	ERJ3GEYJ102V	MGF CHIP		1/16W	1K	
R6606	ERJ3GEYJ103V	MGF CHIP		1/16W	10K	
R6610	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6614	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6615	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6616	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6617	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6618	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6619	MNR14EABJ473	ARRAY CHIP			47K	
R6620	MNR14EABJ473	ARRAY CHIP			47K	
R6623	MNR14EABJ473	ARRAY CHIP			47K	
R6624	MNR14EABJ473	ARRAY CHIP			47K	
R6627	ERJ3GEYJ220V	MGF CHIP		1/16W	22	
R6628	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6643	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6644	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6645	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6646	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6647	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6648	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6649	ERJ3GEYJ220V	MGF CHIP		1/16W	22	
R6650	ERJ3GEY0R00V	MGF CHIP		1/16W	0	●
R6651	ERJ3GEY0R00V	MGF CHIP		1/16W	0	●
R6674	MNR14EABJ473	ARRAY CHIP			47K	
R6675	ERJ3GEYJ220V	MGF CHIP		1/16W	22	
R6676	ERJ3GEYJ220V	MGF CHIP		1/16W	22	
R6678	ERJ3GEY0R00V	MGF CHIP		1/16W	0	●
R6679	ERJ3GEYJ123V	MGF CHIP		1/16W	12K	
R6680	ERJ3GEYJ220V	MGF CHIP		1/16W	22	
R6681	ERJ3GEYJ123V	MGF CHIP		1/16W	12K	
R6682	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6683	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6684	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6685	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6686	ERJ3GEYJ220V	MGF CHIP		1/16W	22	
R6687	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6688	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6689	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6691	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	
R6692	ERJ3GEYJ473V	MGF CHIP		1/16W	47K	

Ref. No.	Part No.	Part Name			Remarks
R6693	ERJ3GEYJ473V	MGF CHIP	1/16W	47K	
R6694	ERJ3GEYJ101V	MGF CHIP	1/16W	100	
R6695	ERJ3GEYJ473V	MGF CHIP	1/16W	47K	
R6696	ERJ3GEY0R00V	MGF CHIP	1/16W	0	●
R6697	MNR14EABJ220	ARRAY CHIP		22	
R6698	MNR14EABJ220	ARRAY CHIP		22	
R6703	MNR14EABJ220	ARRAY CHIP		22	
R6704	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6705	MNR14EABJ220	ARRAY CHIP		22	
R6707	ERJ3GEYJ101V	MGF CHIP	1/16W	100	
R6708	ERJ3GEYJ101V	MGF CHIP	1/16W	100	
R6709	MNR14EABJ220	ARRAY CHIP		22	
R6710	ERJ3GEYJ102V	MGF CHIP	1/16W	1K	
R6711	ERJ3GEYJ102V	MGF CHIP	1/16W	1K	
R6712	ERJ3GEYJ102V	MGF CHIP	1/16W	1K	
R6713	ERJ3GEYJ102V	MGF CHIP	1/16W	1K	
R6718	ERJ3GEYJ473V	MGF CHIP	1/16W	47K	
R6719	ERJ3GEYJ473V	MGF CHIP	1/16W	47K	
R6722	MNR14EABJ220	ARRAY CHIP		22	
R6724	ERJ3GEYJ102V	MGF CHIP	1/16W	1K	
R6725	ERJ3GEYJ473V	MGF CHIP	1/16W	47K	
R6726	ERJ3GEYJ222V	MGF CHIP	1/16W	2.2K	
R6727	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6728	ERJ3GEYJ473V	MGF CHIP	1/16W	47K	
R6730	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6731	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6732	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6733	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6734	MNR14EABJ220	ARRAY CHIP		22	
R6735	MNR14EABJ220	ARRAY CHIP		22	
R6742	MNR14EABJ220	ARRAY CHIP		22	
R6743	MNR14EABJ220	ARRAY CHIP		22	
R6750	MNR14EABJ220	ARRAY CHIP		22	
R6751	MNR14EABJ220	ARRAY CHIP		22	
R6758	MNR14EABJ220	ARRAY CHIP		22	
R6759	MNR14EABJ220	ARRAY CHIP		22	
R6766	MNR14EABJ220	ARRAY CHIP		22	
R6767	MNR14EABJ220	ARRAY CHIP		22	
R6774	MNR14EABJ220	ARRAY CHIP		22	
R6775	MNR14EABJ220	ARRAY CHIP		22	
R6782	MNR14EABJ220	ARRAY CHIP		22	
R6783	MNR14EABJ220	ARRAY CHIP		22	
R6790	MNR14EABJ220	ARRAY CHIP		22	
R6791	MNR14EABJ220	ARRAY CHIP		22	
R6798	MNR14EABJ220	ARRAY CHIP		22	
R6799	MNR14EABJ220	ARRAY CHIP		22	
R6806	MNR14EABJ220	ARRAY CHIP		22	
R6807	MNR14EABJ220	ARRAY CHIP		22	
R6814	MNR14EABJ220	ARRAY CHIP		22	
R6815	MNR14EABJ220	ARRAY CHIP		22	
R6850	MNR14EABJ220	ARRAY CHIP		22	
R6851	MNR14EABJ220	ARRAY CHIP		22	
R6852	MNR14EABJ220	ARRAY CHIP		22	
R6853	MNR14EABJ220	ARRAY CHIP		22	
R6854	MNR14EABJ220	ARRAY CHIP		22	
R6855	MNR14EABJ220	ARRAY CHIP		22	
R6856	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6857	MNR14EABJ220	ARRAY CHIP		22	
R6858	MNR14EABJ220	ARRAY CHIP		22	
R6859	MNR14EABJ220	ARRAY CHIP		22	
R6860	MNR14EABJ220	ARRAY CHIP		22	
R6861	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6862	MNR14EABJ220	ARRAY CHIP		22	
R6863	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6864	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6865	MNR14EABJ220	ARRAY CHIP		22	
R6866	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6867	MNR14EABJ220	ARRAY CHIP		22	
R6868	MNR14EABJ220	ARRAY CHIP		22	
R6869	MNR14EABJ220	ARRAY CHIP		22	
R6870	ERJ3GEYJ102V	MGF CHIP	1/16W	1K	
R6871	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6872	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6873	ERJ3GEYJ220V	MGF CHIP	1/16W	22	
R6874	MNR14EABJ220	ARRAY CHIP		22	
R6875	MNR14EABJ220	ARRAY CHIP		22	
R6876	MNR14EABJ220	ARRAY CHIP		22	
R6877	MNR14EABJ220	ARRAY CHIP		22	

Ref. No.	Part No.	Part Name			Remarks
		CAPACITORS			
C1901	ECEV1CA470S	ELECTROLYTIC CHIP	16V	47	
C1902	ECEV1EA330SP	ELECTROLYTIC CHIP	25V	33	
C1903	ECEV0JA101S	ELECTROLYTIC CHIP	6.3V	100	
C1904	ECEV0JA101S	ELECTROLYTIC CHIP	6.3V	100	
C1905	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C1906	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C1907	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C1908	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C1909	ECEV1EA100S	ELECTROLYTIC CHIP	25V	10	
C1910	ECEV1EA100S	ELECTROLYTIC CHIP	25V	10	
C1911	ECEV1EA100S	ELECTROLYTIC CHIP	25V	10	
C1912	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C1913	ECEV1EA100S	ELECTROLYTIC CHIP	25V	10	
C1914	ECEV1EA100S	ELECTROLYTIC CHIP	25V	10	
C1915	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2001	ECEV1CA220S	ELECTROLYTIC CHIP	16V	22	
C2002	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2003	ECEV0JA470S	ELECTROLYTIC CHIP	6.3V	47	
C2005	ECEV0JA101S	ELECTROLYTIC CHIP	6.3V	100	
C2006	ECST1AY106	TANTALUM CHIP	10V	10	
C2007	ECUV1H103ZFV	C CHIP +80%-20%	50V	0.01	
C2008	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2009	ECEV0JA101S	ELECTROLYTIC CHIP	6.3V	100	
C2010	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2011	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2012	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2013	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2014	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2015	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2016	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2018	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2019	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2020	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2021	EEVHA0J101P	ELECTROLYTIC CHIP	6.3V	100	
C2022	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2023	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2024	EEVHA0J101P	ELECTROLYTIC CHIP	6.3V	100	
C2025	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2026	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2027	EEVHA0J101P	ELECTROLYTIC CHIP	6.3V	100	
C2028	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2029	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2030	ECEV1HA010S	ELECTROLYTIC CHIP	50V	1	
C2031	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2032	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2033	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2034	ECEV0JA470S	ELECTROLYTIC CHIP	6.3V	47	
C2035	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2036	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2037	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2038	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2039	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2040	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2041	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2042	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2043	ECUV1H100CCV	C CHIP +-0.25P	50V	10P	
C2044	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2045	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2046	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2047	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2048	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2049	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2050	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2051	ECUV1H100CCV	C CHIP +-0.25P	50V	10P	
C2052	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2053	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2054	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2055	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2056	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2057	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2058	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2059	ECUV1H100CCV	C CHIP +-0.25P	50V	10P	
C2060	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2061	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	
C2062	ECST0JY106	TANTALUM CHIP	6.3V	10	
C2063	ECUV1E104ZFV	C CHIP +80%-20%	25V	0.1	

Ref. No.	Part No.	Part Name	Remarks
C2064	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2065	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2066	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2067	ECUV1H090CCV	C CHIP +-0.25P 50V 9P	
C2068	ECUV1H090CCV	C CHIP +-0.25P 50V 9P	
C2071	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2073	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2074	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2075	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2077	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2078	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C2079	EEVHA0J470R	ELECTROLYTIC CHIP 6.3V 47	
C2080	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2081	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2082	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2083	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2084	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C2086	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2087	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C2088	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2089	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2090	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2091	ECST0JY106	TANTALUM CHIP 6.3V 10	
C2092	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2093	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2094	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2095	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2096	ECST0JY106	TANTALUM CHIP 6.3V 10	
C2097	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C2098	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2099	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2100	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2101	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2102	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2103	ECST0JY106	TANTALUM CHIP 6.3V 10	
C2104	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2105	ECST1AY106	TANTALUM CHIP 10V 10	
C2106	ECST1AY106	TANTALUM CHIP 10V 10	
C2107	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2108	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2109	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2110	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2111	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2112	ECST1AY106	TANTALUM CHIP 10V 10	
C2113	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2114	ECST0JY106	TANTALUM CHIP 6.3V 10	
C2115	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2116	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2117	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2118	ECST0JY106	TANTALUM CHIP 6.3V 10	
C2119	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2121	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2122	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2123	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2124	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2125	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2126	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2128	ECST0JY106	TANTALUM CHIP 6.3V 10	
C2129	ECST0JY106	TANTALUM CHIP 6.3V 10	
C2130	ECST0JY106	TANTALUM CHIP 6.3V 10	
C2132	ECST1AY106	TANTALUM CHIP 10V 10	
C2136	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2137	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C2138	ECST1AY106	TANTALUM CHIP 10V 10	
C3001	ECEV1CA220S	ELECTROLYTIC CHIP 16V 22	
C3002	ECEV1CA220S	ELECTROLYTIC CHIP 16V 22	
C3003	ECEV1CA220S	ELECTROLYTIC CHIP 16V 22	
C3004	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C3005	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C3006	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C3007	ECEV1AA101SP	ELECTROLYTIC CHIP 10V 100	
C3008	ECEV1AA101SP	ELECTROLYTIC CHIP 10V 100	
C3009	ECEV1AA101SP	ELECTROLYTIC CHIP 10V 100	
C3010	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3011	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3012	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3013	ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	
C3014	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	

Ref. No.	Part No.	Part Name	Remarks
C3015	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C3016	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3017	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C3018	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C3019	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C3020	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C3021	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3022	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3023	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3024	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3025	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3026	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3027	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3028	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3029	ECEV1CA101WP	ELECTROLYTIC CHIP 16V 100	
C3030	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3031	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C3032	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C3033	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C3034	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C3035	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C3036	ECEV1HA010S	ELECTROLYTIC CHIP 50V 1	
C3037	ECUV1H121JCV	C CHIP +-5% 50V 120P	
C3038	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C3039	ECUV1E683KBN	C CHIP 25V 0.068	
C3040	ECUV1H103KBN	C CHIP 50V 0.01	
C3041	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C3042	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C3043	ECUV1H561JCV	C CHIP +-5% 50V 560P	
C3045	ECUV1H101JCV	C CHIP +-5% 50V 100P	
C3046	ECUV1H101JCV	C CHIP +-5% 50V 100P	
C3047	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C3048	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3049	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3050	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3051	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C3052	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C3053	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C3054	ECUV1E104KBN	C CHIP 25V 0.1	
C3055	ECUV1E104KBN	C CHIP 25V 0.1	
C3056	ECUV1E104KBN	C CHIP 25V 0.1	
C3057	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3059	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3060	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3061	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3062	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3063	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3064	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3066	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3067	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3068	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3069	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3070	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3071	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3072	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3073	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3074	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3501	ECUV1H221JCV	C CHIP +-5% 50V 220P	
C3502	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3503	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C3504	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3505	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33	
C3506	ECUV1H050CCV	C CHIP +-0.25P 50V 5P	
C3508	ECUV1H221JCV	C CHIP +-5% 50V 220P	
C3509	ECEV1ES4R7S	ELECTROLYTIC CHIP 25V 4.7	
C3510	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3511	ECUV1H221JCV	C CHIP +-5% 50V 220P	
C3512	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3513	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C3514	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3515	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33	
C3516	ECUV1H050CCV	C CHIP +-0.25P 50V 5P	
C3517	ECUV1H221JCV	C CHIP +-5% 50V 220P	
C3518	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3519	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C3520	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3521	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33	
C3522	ECUV1H050CCV	C CHIP +-0.25P 50V 5P	

Ref. No.	Part No.	Part Name	Remarks
C3523	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3524	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3525	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3527	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3528	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3529	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3530	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3531	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3532	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3533	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3534	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3535	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3536	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33	
C3537	ECEV0JA220S	ELECTROLYTIC CHIP 6.3V 22	
C3538	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3539	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3540	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3541	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3542	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3543	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3544	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3545	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3546	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3547	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3548	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3549	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3550	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3551	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3552	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3553	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3554	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3555	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3556	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3557	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3558	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3559	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33	
C3560	ECEV0JA220S	ELECTROLYTIC CHIP 6.3V 22	
C3561	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3562	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3563	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3564	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3565	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3566	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3567	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3568	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3569	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3570	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3571	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3572	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3573	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3574	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3575	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3576	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3577	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3579	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3580	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3581	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3582	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33	
C3583	ECEV0JA220S	ELECTROLYTIC CHIP 6.3V 22	
C3584	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3585	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3586	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3587	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3588	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3589	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3590	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3591	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3592	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3593	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3594	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3595	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3596	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3597	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3598	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3599	ECEV0JA220S	ELECTROLYTIC CHIP 6.3V 22	
C3600	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3601	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3602	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	

Ref. No.	Part No.	Part Name	Remarks
C3603	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33	
C3604	VCUSTBA105KB	C CHIP 10V 1	
C3605	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33	
C3606	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3607	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3608	VCUSTBA105KB	C CHIP 10V 1	
C3609	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33	
C3610	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3611	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3612	VCUSTBA105KB	C CHIP 10V 1	
C3613	ECEV1EA330SP	ELECTROLYTIC CHIP 25V 33	
C3614	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3615	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3616	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C3617	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3618	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3620	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3621	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3622	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3623	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3624	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C3625	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4001	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C4002	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4003	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C4004	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C4005	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4006	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C4007	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C4008	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C4009	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C4010	ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	
C4011	ECUV1H562KBV	C CHIP 50V 5600P	
C4012	ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	
C4014	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C4015	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C4016	ECEV1ES4R7S	ELECTROLYTIC CHIP 25V 4.7	
C4017	ECEV1CA101WP	ELECTROLYTIC CHIP 16V 100	
C4018	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C4019	ECUV1E333KBV	C CHIP 25V 0.033	
C4020	ECEV1VS2R2S	ELECTROLYTIC CHIP 35V 2.2	
C4021	ECUV1C473KBV	C CHIP 16V 0.047	
C4022	ECA1EM221E	ELECTROLYTIC 25V 220	
C4023	ECA1EM471E	ELECTROLYTIC 25V 470	
C4024	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4025	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C4026	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4027	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4028	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4029	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4030	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4031	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4032	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4033	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4034	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C4035	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C4036	ECA1EM331E	ELECTROLYTIC 25V 330	
C4037	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5001	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C5002	ECUV1E473ZFV	C CHIP +80%-20% 25V 0.047	
C5003	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C5004	ECUV1H560JCV	C CHIP +-5% 50V 56P	
C5005	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5006	ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	
C5007	ECEV1VS2R2S	ELECTROLYTIC CHIP 35V 2.2	
C5008	ECEV1VS2R2S	ELECTROLYTIC CHIP 35V 2.2	
C5009	ECEV1VS2R2S	ELECTROLYTIC CHIP 35V 2.2	
C5010	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C5011	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C5012	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C5013	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C5014	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C5015	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5016	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C5017	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C5018	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5019	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C5020	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	

Ref. No.	Part No.	Part Name	Remarks
C5021	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C5022	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C5023	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5024	ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	
C5025	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5026	ECUV1H181JCV	C CHIP +-5% 50V 180P	
C5027	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5028	ECUV1H103KBV	C CHIP 50V 0.01	
C5029	ECUV1H101JCV	C CHIP +-5% 50V 100P	
C5030	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C5031	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5032	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5033	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C5034	ECUV1H331JCV	C CHIP +-5% 50V 330P	
C5035	ECUV1H391JCV	C CHIP +-5% 50V 390P	
C5036	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5038	ECUV1H820JCV	C CHIP +-5% 50V 82P	
C5039	ECUV1E473ZFV	C CHIP +80%-20% 25V 0.047	
C5041	ECEV1ES4R7S	ELECTROLYTIC CHIP 25V 4.7	
C5042	ECEV1VS2R2S	ELECTROLYTIC CHIP 35V 2.2	
C5044	ECUV1H152KBV	C CHIP 50V 1500P	
C5045	ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	
C5046	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5047	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C5048	ECEV1HA010S	ELECTROLYTIC CHIP 50V 1	
C5049	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C5050	ECUV1H103KBV	C CHIP 50V 0.01	
C5051	ECUV1H392KBV	C CHIP 50V 3900P	
C5052	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5053	ECEV1HA010S	ELECTROLYTIC CHIP 50V 1	
C5055	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C5056	ECEV1ES4R7S	ELECTROLYTIC CHIP 25V 4.7	
C5057	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C5058	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5059	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5060	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5061	ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	
C5062	ECUV1H120JCV	C CHIP +-5% 50V 12P	
C5063	ECA0JM102E	ELECTROLYTIC 6.3V 1000	
C5064	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5066	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5067	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5068	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5069	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5071	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5072	ECEV1ES4R7S	ELECTROLYTIC CHIP 25V 4.7	
C5073	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C5074	ECUV1H103KBV	C CHIP 50V 0.01	
C5075	ECEV1VS2R2S	ELECTROLYTIC CHIP 35V 2.2	
C5076	ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	
C5077	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C5080	ECUV1H040CCV	C CHIP +-0.25P 50V 4P	
C5081	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C5082	VCUSTBA105KB	C CHIP 10V 1	
C5083	VCUSQBA225KB	C CHIP 10V 2.2	
C5084	ECUV1C105ZFN	C CHIP +80%-20% 16V 1	
C6001	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C6002	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C6003	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C6004	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C6005	ECUV1H102KBV	C CHIP 50V 1000P	
C6006	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C6007	ECEV1VS2R2S	ELECTROLYTIC CHIP 35V 2.2	
C6008	ECEV1VS2R2S	ELECTROLYTIC CHIP 35V 2.2	
C6009	ECEV1VS2R2S	ELECTROLYTIC CHIP 35V 2.2	
C6010	ECEV1VS2R2S	ELECTROLYTIC CHIP 35V 2.2	
C6011	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6012	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C6013	ECUV1H180JCV	C CHIP +-5% 50V 18P	
C6014	ECUV1H101JCV	C CHIP +-5% 50V 100P	
C6015	ECUV1H180JCV	C CHIP +-5% 50V 18P	
C6016	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6017	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C6018	ECUV1H101JCV	C CHIP +-5% 50V 100P	
C6020	ECUV1A105ZFV	C CHIP +80%-20% 10V 1	
C6021	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6022	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C6024	ECUV1A105ZFV	C CHIP +80%-20% 10V 1	

Ref. No.	Part No.	Part Name	Remarks
C6025	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6026	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6027	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C6028	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C6029	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6030	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6031	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C6032	ECUV1H060CCV	C CHIP +-0.25P 50V 6P	
C6033	ECUV1H060CCV	C CHIP +-0.25P 50V 6P	
C6040	ECUV1C104KBV	C CHIP 16V 0.1	
C6041	ECUV1H101JCV	C CHIP +-5% 50V 100P	
C6042	ECUV1H101JCV	C CHIP +-5% 50V 100P	
C6043	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C6044	ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	
C6045	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C6601	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6602	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6603	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6604	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6605	ECST0JY106	TANTALUM CHIP 6.3V 10	
C6606	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6607	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6608	ECST1AY106	TANTALUM CHIP 10V 10	
C6609	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6610	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6611	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6612	ECST0JY106	TANTALUM CHIP 6.3V 10	
C6613	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6614	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6615	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6616	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C6617	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6618	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6619	ECST0JY106	TANTALUM CHIP 6.3V 10	
C6620	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6621	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6622	ECST0JY106	TANTALUM CHIP 6.3V 10	
C6623	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6624	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C6625	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6626	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6627	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6628	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6629	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C6630	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6631	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6632	ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	
C6633	ECEV0JA101S	ELECTROLYTIC CHIP 6.3V 100	
C6634	ECST0JY106	TANTALUM CHIP 6.3V 10	
C6636	VCUSTBC474KB	C CHIP 16V 0.47	
C6637	VCUSTBC224KB	C CHIP 16V 0.22	
C6638	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6639	ECST0JY106	TANTALUM CHIP 6.3V 10	
C6640	ECST1AY106	TANTALUM CHIP 10V 10	
C6641	ECST1AY106	TANTALUM CHIP 10V 10	
C6642	ECST1AY106	TANTALUM CHIP 10V 10	
C6643	ECST0JY106	TANTALUM CHIP 6.3V 10	
C6644	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6645	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
C6646	ECST1AY106	TANTALUM CHIP 10V 10	
C6647	ECST1AY106	TANTALUM CHIP 10V 10	
C6648	ECST0JY106	TANTALUM CHIP 6.3V 10	
C6649	ECUV1E104ZFV	C CHIP +80%-20% 25V 0.1	
		FILTERS	
FL2001	NFM51R10P107	L/C COMPLX CMP	
FL3004	NFM51R10P107	L/C COMPLX CMP	
FL3005	NFM51R10P107	L/C COMPLX CMP	
FL3006	NFM51R10P107	L/C COMPLX CMP	
FL3007	NFM51R10P107	L/C COMPLX CMP	
FL3008	LSLFAA1H101	L/C COMPLX CMP 50V 100P	
FL3009	LSLFAA1H101	L/C COMPLX CMP 50V 100P	
FL3010	NFM51R20P207	L/C COMPLX CMP 200	
FL3011	LSLFAA1H101	L/C COMPLX CMP 50V 100P	
FL3012	LSLFAA1H101	L/C COMPLX CMP 50V 100P	
FL4001	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL4002	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	

(E71, E72, E73, E74)

Ref. No.	Part No.	Part Name	Remarks
FL4003	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL4004	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL4005	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL4006	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL5001	LSLFAA1H101	L/C COMPLX CMP 50V 100P	
FL5004	LSLFAA1H101	L/C COMPLX CMP 50V 100P	
FL5005	LSLFAA1H101	L/C COMPLX CMP 50V 100P	
FL5006	LSLF0004T	L/C COMPLX CMP	
FL5007	LSLF0004T	L/C COMPLX CMP	
FL5008	LSLF0004T	L/C COMPLX CMP	
FL6001	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6002	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6003	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6004	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6005	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6006	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6007	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6008	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6009	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6010	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6011	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6012	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6013	LSLFAA1H102	L/C COMPLX CMP 50V 1000P	
FL6014	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6015	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6016	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6017	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6018	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6019	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6020	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6021	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6022	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6023	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6024	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6025	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6026	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6027	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6028	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
FL6029	LSLFBA1H101A	L/C COMPLX CMP 50V 100	
		COILS	
L2001	VLQ0163J220	CHIP +-5% 22	
L2002	VLQ0163J220	CHIP +-5% 22	
L2003	VLQ0163J220	CHIP +-5% 22	
L2004	VLPS0090	CHIP	
L2005	FBM2125HS420	CHIP 42	
L2006	VLPS0090	CHIP	
L2007	VLQ0163J220	CHIP +-5% 22	
L2008	VLQ0163J271	CHIP +-5% 270	
L2009	VLQ0163J271	CHIP +-5% 270	
L2011	VLQ0163J220	CHIP +-5% 22	
L2012	VLQ0163J271	CHIP +-5% 270	
L2013	FBM2125HS420	CHIP 42	
L2014	FBM2125HS420	CHIP 42	
L2015	VLQ0163J220	CHIP +-5% 22	
L2018	VLQ0163J220	CHIP +-5% 22	
L3001	VLPS0090	CHIP	
L3002	VLPS0090	CHIP	
L3003	VLPS0090	CHIP	
L3004	VLQ0163J220	CHIP +-5% 22	
L3005	VLQ0163J220	CHIP +-5% 22	
L3006	VLQ0163J100	CHIP +-5% 10	
L3007	VLQ0163J220	CHIP +-5% 22	
L3008	VLQ0163J220	CHIP +-5% 22	
L3009	VLQ0163J100	CHIP +-5% 10	
L3501	VLPS0090	CHIP	
L3502	VLPS0090	CHIP	
L3503	VLPS0090	CHIP	
L3504	VLQ0163J220	CHIP +-5% 22	
L3505	VLQ0163J220	CHIP +-5% 22	
L3506	VLQ0163J220	CHIP +-5% 22	
L3507	VLQ0163J220	CHIP +-5% 22	
L3508	VLQ0163J220	CHIP +-5% 22	
L3509	VLQ0163J220	CHIP +-5% 22	
L3510	VLQ0163J220	CHIP +-5% 22	
L3511	VLQ0163J220	CHIP +-5% 22	
L3512	VLQ0163J220	CHIP +-5% 22	

Ref. No.	Part No.	Part Name	Remarks
L3513	VLQ0163J220	CHIP +-5% 22	
L3514	VLQ0163J220	CHIP +-5% 22	
L3515	VLPS0090	CHIP	
L4001	VLQ0163J271	CHIP +-5% 270	
L4003	VLQ0163J220	CHIP +-5% 22	
L5001	VLQ0163J100	CHIP +-5% 10	
L5002	VLPS0090	CHIP	
L5003	VLQ0163J220	CHIP +-5% 22	
L5004	VLQ0163J220	CHIP +-5% 22	
L5005	VLQ0163J220	CHIP +-5% 22	
L5006	VLQ0163J220	CHIP +-5% 22	
L5007	VLQ0163J220	CHIP +-5% 22	
L5008	VLQ0163J220	CHIP +-5% 22	
L5009	VLQ0163J101	CHIP +-5% 100	
L5010	VLQ0163J100	CHIP +-5% 10	
L6001	VLQ0163J220	CHIP +-5% 22	
L6002	VLQ0163J4R7	CHIP +-5% 4.7	
L6003	ERJ14Y0R00H	MGF CHIP 0	●
L6004	VLQ0163J4R7	CHIP +-5% 4.7	
L6005	ERJ14Y0R00H	MGF CHIP 0	●
L6006	ERJ14Y0R00H	MGF CHIP 0	●
L6007	VLPS0090	CHIP	
L6603	VLQ0163J220	CHIP +-5% 22	
L6604	VLQ0163J4R7	CHIP +-5% 4.7	
L6605	VLQ0163J220	CHIP +-5% 22	
L6606	VLQ0163J4R7	CHIP +-5% 4.7	
L6607	VLQ0163J4R7	CHIP +-5% 4.7	
L6615	VLQ0163J4R7	CHIP +-5% 4.7	
L6616	VLQ0163J220	CHIP +-5% 22	
		CRYSTAL OSCILLATOR	
X2001	VSXS0803		
X5001	LSSX0011		
X6001	LSSX0009		
X6002	LSSX0010		
X6601	LSSX0012		
		PIN HEADERS	
P1901	LSJSME03E	CONNECTOR 3P	
P1902	LSJSME06E	CONNECTOR 6P	
P1905	LSJSPC08F	CONNECTOR 8P	
P3501	VJSS3332	CONNECTOR 30P	
P3502	VJSS3332	CONNECTOR 30P	
P3503	VJSS3332	CONNECTOR 30P	
P4001	LSJSPC02F	CONNECTOR 2P	
P6001	LSJSME03E	CONNECTOR 3P	
P6002	LSJSME03E	CONNECTOR 3P	
P6004	LSJSME02E	CONNECTOR 2P	
P6005	LSJS0085	CONNECTOR 18P	
P6601	LSJS0086	PC-CARD SOCKET	
		FUSE & PROTECTOR	
PR1902	ICP-S2.3	IC PROTECTOR CHIP 2.3A	⚠
PR1903	ICP-S1.2	IC PROTECTOR CHIP 1.2A	⚠
PR1904	ICP-S1.8	IC PROTECTOR CHIP 1.8A	⚠
PR1905	ICP-S1.8	IC PROTECTOR CHIP 1.8A	⚠
		JACKS	
JK3001	LSJJ0130	D-SUB MINI JACK SOCKET	
JK3002	LSJJ0130	D-SUB MINI JACK SOCKET	
JK4001	LSJJ0131	STEREO MINI JACK SOCKET	
JK4002	LSJJ0132	STEREO MINI JACK SOCKET	
JK5001	LSJJ0134	RCA PIN JACK SOCKET	
JK5002	LSJJ0133	S-JACK SOCKET	
JK6001	LSJJ0128	MOUSE JACK SOCKET	
JK6002	LSJJ0129	RS-232C JACK SOCKET	
		MISCELLANEOUS	
E71	LSKF0268	JACK COVER	
E72	LSMA0330	JACK PLATE, STEEL	
E73	GP1U292Q	INFRARED RECEIVER UNIT	IKA
E74	LSKF0249	CARD DOOR-LID	

(E14, E15, E17, E18, E19, E21, E22, E26, E31, E32, E33, E34, E35, E36, E37, E38, E39, E40, E41, E44, E45, E46, E47, E48, E49, E51, E52, E53, E65, E75, E76, E77, E78, E79, E80, E81, E82, E83, E84, E90)

Ref. No.	Part No.	Part Name	Remarks
E75	LSMB0137	DOOR SPRING	
E76	LSGU0102	EJECT KNOB	
E77	LSJS0087	PC CARD EJECTOR	
E78	XYN2+F8	SCREW W/WASHER, STEEL	
E79	XSB3+8FZ	SCREW, STEEL	
E80	XTB3+8GFZ	TAPPING SCREW, STEEL	
E81	LSSC0252	CARD PLATE, STEEL	
E82	LSMX0063	SPACER	
E83	VMFS0321	SHEET, NYLON+RAYON	
E84	LSMT0043	CUSHION, POLYURETHANE+NYLON	
		INFRARED SENSOR	■
		FRONT C.B.A.	
		CAPACITORS	
C6801	ECEA0JKA470	ELECTROLYTIC 6.3V 47	
		PIN HEADERS	
P6801	LSJA0233	CONNECTOR CABLE W/PLUG, DC 6V	
		MISCELLANEOUS	
E26	PNA4611M00XD	INFRARED RECEIVER UNIT	
		THERMISTOR C.B.A.	■
		RESISTORS	
R6402	VRTS0013	THERMISTOR	⚠
		PIN HEADERS	
P6402	LSJA0232	CONNECTOR CABLE W/PLUG, DC 5V	
		ELECTRICAL PARTS	
		LOCATED ON CHASSIS	
P1101	LSJS0088	INLET	⚠
SW1101	LSSW0013	MAIN SWITCH	⚠
SW1141	AGX205	INTER LOCK SWITCH	⚠
F1101	LSSF0013B50T	FUSE 250V 5A	⚠
F1102	LSSF0013B50T	FUSE 250V 5A	⚠
E14	FBA06T24HP	POWER FAN	⚠
E15	LSJA0235	FILTER SW UNIT, DC 5V	
E17	LSJA0234	SPEAKER CABLE W/PLUG, 12VPP	
E18	FBA09A12H0	LAMP FAN-1	⚠
E19	LSJA0228	FAN CABLE W/PLUG, DC 13.5V	
E21	LSRF0006	DUCT FAN	⚠
E22	FAL3F12LLSA	LAMP FAN-2	⚠
E31	KGLS-5RF	RIVET, NYLON	
E32	KGLS-6RF	LOCKING CARD SPACER	
E33	LSMA0333	BALLAST CASE A, STEEL	
E34	LSMA0334	BALLAST CASE B, STEEL	
E35	LSMZ0203	BALLAST BARRIER A1	⚠
E36	LSMZ0204	BALLAST BARRIER A2	⚠
E37	LSMZ0205	BALLAST BARRIER A3	⚠
E38	XTN3+4F	TAPPING SCREW, STEEL	
E39	XTV3+20J	TAPPING SCREW, STEEL	
E40	XYE3+FF6	SCREW W/WASHER, STEEL	
E41	VMFS0136	SHEET, NYLON+RAYON	
E44	LSMP0195	BALLAST PIECE	
E45	LSMZ0221	BALLAST BARRIER A4	⚠
E46	LSMZ0206	BALLAST BARRIER B1	⚠
E47	LSMZ0207	BALLAST BARRIER B2	⚠
E48	LSMZ0222	BALLAST BARRIER B3	⚠
E49	LSMZ0223	BALLAST BARRIER B4	⚠
E51	LSMT0042	CUSHION, POLYURETHANE+NYLON	
E52	VZFS0006	CLAMPER	
E53	LSMX0066	RIVET, NYLON	
E65	XYN4+C6FN	SCREW W/WASHER, STEEL	
E90	LSEE0003	TEMPERATURE FUSE UNIT	

Ref. No.	Part No.	Part Name	Remarks
		SUMMARY OF "E" ITEM NUMBERS	
		REFER TO ELECTRICAL PARTS LIST	
		FOR MODEL INFORMATION	
E1	LSEP3002A1	MAIN C.B.A.	RTL
E3	LSEP1007A1	MAIN POWER C.B.A. NR	
E4	LSEB1009A1	FILTER UNIT NR	
E5	LSEP1011A1	FAN DRIVE C.B.A. NR	
E7	LSEP1008A1	SYSTEM POWER C.B.A. NR	
E11	LSEP0A10A1	INFRARED SENSOR FRONT C.B.A.	RTL
E13	LSEP0A11A1	THERMISTOR C.B.A.	RTL
E14	FBA06T24HP	POWER FAN	⚠
E15	LSJA0235	FILTER SW UNIT, DC 5V	
E17	LSJA0234	SPEAKER CABLE W/PLUG, 12VPP	
E18	FBA09A12H0	LAMP FAN-1	⚠
E19	LSJA0228	FAN CABLE W/PLUG, DC 13.5V	
E21	LSRF0006	DUCT FAN	⚠
E22	FAL3F12LLSA	LAMP FAN-2	⚠
E26	PNA4611M00XD	INFRARED RECEIVER UNIT	
E31	KGLS-5RF	RIVET, NYLON	
E32	KGLS-6RF	LOCKING CARD SPACER	
E33	LSMA0333	BALLAST CASE A, STEEL	
E34	LSMA0334	BALLAST CASE B, STEEL	
E35	LSMZ0203	BALLAST BARRIER A1	⚠
E36	LSMZ0204	BALLAST BARRIER A2	⚠
E37	LSMZ0205	BALLAST BARRIER A3	⚠
E38	XTN3+4F	TAPPING SCREW, STEEL	
E39	XTV3+20J	TAPPING SCREW, STEEL	
E40	XYE3+FF6	SCREW W/WASHER, STEEL	
E41	VMFS0136	SHEET, NYLON+RAYON	
E44	LSMP0195	BALLAST PIECE	
E45	LSMZ0221	BALLAST BARRIER A4	⚠
E46	LSMZ0206	BALLAST BARRIER B1	⚠
E47	LSMZ0207	BALLAST BARRIER B2	⚠
E48	LSMZ0222	BALLAST BARRIER B3	⚠
E49	LSMZ0223	BALLAST BARRIER B4	⚠
E51	LSMT0042	CUSHION, POLYURETHANE+NYLON	
E52	VZFS0006	CLAMPER	
E53	LSMX0066	RIVET, NYLON	
E65	XYN4+C6FN	SCREW W/WASHER, STEEL	
E71	LSKF0268	JACK COVER	
E72	LSMA0330	JACK PLATE, STEEL	
E73	GP1U292Q	INFRARED RECEIVER UNIT	MKA
E74	LSKF0249	CARD DOOR-LID	
E75	LSMB0137	DOOR SPRING	
E76	LSGU0102	EJECT KNOB	
E77	LSJS0087	PC CARD EJECTOR	
E78	XYN2+F8	SCREW W/WASHER, STEEL	
E79	XSB3+8FZ	SCREW, STEEL	
E80	XTB3+8GFZ	TAPPING SCREW, STEEL	
E81	LSSC0252	CARD PLATE, STEEL	
E82	LSMX0063	SPACER	
E83	VMFS0321	SHEET, NYLON+RAYON	
E84	LSMT0043	CUSHION, POLYURETHANE+NYLON	
E90	LSEE0003	TEMPERATURE FUSE UNIT	

— MEMO —

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